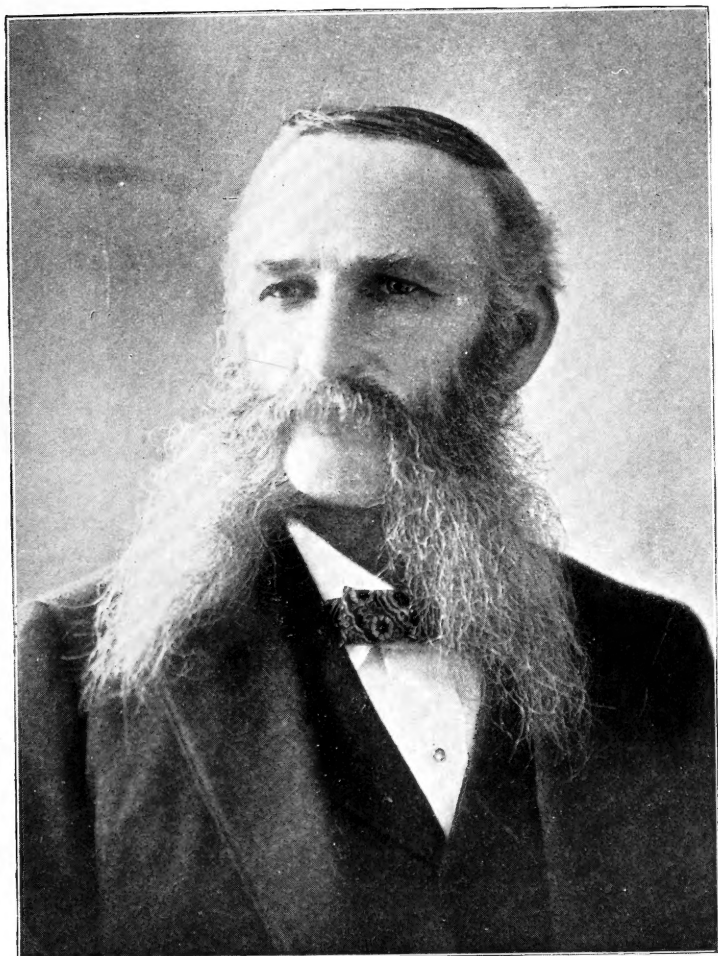


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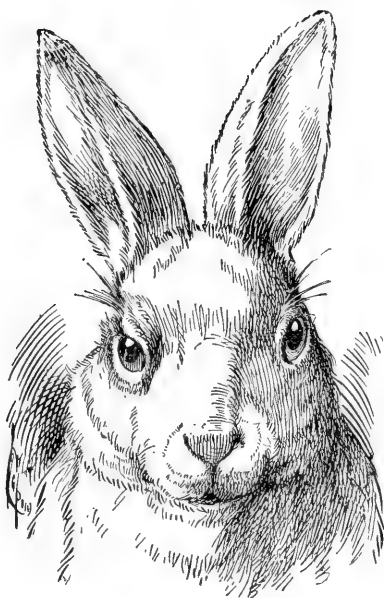
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BONANZA QUEEN.

Property of Bonanza Rabbitry. First attempt
to illustrate the Belgian Hare in the United
States. Presented by the Bonanza Rabbitry
in 1897.

THE
BONANZA RABBITRY
MANUAL

A PRACTICAL TREATISE

Presenting Tested and Approved Methods for the

Mating, Feeding, Management, Exhibiting and Marketing

of the

Prolific and Profitable
Far-famed Belgian Hare

NOBLEST OF THE RABBIT FAMILY

by

DR. B. C. PLATT

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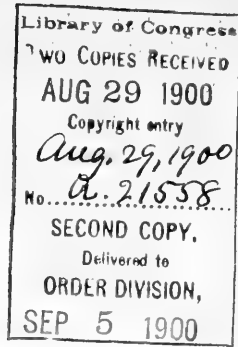
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This Manual

Is the most complete and comprehensive work of its kind ever issued. It gives full directions on every detail—for constructing a rabbitry, stocking it with the prime favorite of the rabbit family wherever known, the Belgian Hare; for breeding, rearing, managing, feeding, marketing and cooking this dainty animal, a most toothsome and popular luxury for the table. By following the directions herein contained every fancier may secure success and profit. It is the result of extensive experience and many original experiments. The present edition has been revised, enlarged and greatly improved. Many important topics omitted in previous editions are here fully discussed.

That its perusal may lead to a profitable occupation for many persons, and the gradual development of a still better type of an already noble animal, is the wish of

THE AUTHOR.

The Bonanza Rabbitry Manual.

The Belgian hare has received his highest development in England, where he has passed through various interesting phases, and England still sets the fashion for the world in hares as in some other things. There, some fifty years ago or more, certain people of an inquiring turn of mind conceived the idea of breeding, by inter-mating different types of rabbit, a rabbit that should resemble, as closely as possible, the native, wild, English hare, but with important improvements. The wild hare is a slow breeder. The female produces only two or three litters a year, and only two or three young at a litter. Other breeds of rabbit are very prolific. The wild hare pines away and dies in captivity. Other breeds are easily domesticated. But the wild hare in form, color, action and all that goes to make a beautiful animal, has charms and graces that no other species possesses.

Therefore, taking the wild hare as a model, the first experimenters selected individuals of other varieties and mated them to produce a progeny closely resembling the wild hare. The wild hare will not mate with any other breed. If it would the problem before these enthusiasts in old England would have been vastly simpler than it was. But all efforts, and many have been made, to secure a cross between the wild hare and some other variety have been utterly without result. The product of crossing breeds may be termed a mule, and will not produce young.

The end of the long series of experiments is the modern, high-class, thoroughbred Belgian hare, and he is a very different individual from those first

obtained. These latter were called Leporines. They were dark, grayish, spotted, mottled beasts, far removed in beauty from the true Belgian as he exists today, with a rich, "rufus red" as the foundation of his splendid glossy coat, and approximating far more closely than the Leporine the beautiful ideal established by the wild hare of England. Not only is the modern Belgian very attractive in appearance, but he is exceedingly prolific, readily adapts himself to captivity and, as a table luxury, his flesh is a most distinct and appetizing novelty. These facts give him a two-fold value; first, to the fancier and breeder on scientific principles; and, second, to the man of humbler, perhaps coarser tastes, whose soul and pocket-book can be reached only through his stomach.

England is today sending her finest specimens, at enormous prices compared with the prices of two or three years ago, into Germany, France, Austria and especially to America. These are the fancy individuals selected, and exported for breeding purposes only. The other phase of the industry, that of providing a delicious article of food, has reached enormous proportions in Europe and millions of pounds of hare meat are consumed every week in the great cities of the Old World.

The Belgian has become at once extremely popular wherever he has been introduced. It is a fact that no community, so far as heard from, has ever refused to receive and encourage this beautiful little animal. His progress has probably been more rapid in Southern California than in most other sections. Within eighteen months, from about

November 1, 1898, to May 1, 1900, some 1400 rabbitries, averaging nearly one hundred head each were founded in this part of the State of California, a district with a population of only about 300,000 people. This is a vivid illustration of the taking qualities of this noblest and most useful of the rabbit family.

There are various reasons for this great popularity of the Belgian hare wherever known. The first of these is his beauty. I shall discuss this more at length in my description of the Belgian in a succeeding paragraph. The second is his docility and fondness for fondling. The Belgian hare makes a most attractive pet. He is intelligent, becomes attached to his owner, can readily be trained to pose and to come at call. He appreciates care and good treatment. The third reason is the interest aroused in every member of the family fortunate enough to own Belgians by observing the habits of the animal, especially of the does in caring for their young. As in all wild animals (for the Belgian is really a wild animal domesticated) the mother love is very strong. All their habits of life, the poses that they assume, their ways of communicating with each other, their care of their persons, etc., are intensely interesting. Every sound mind harbors a love for animals, and the wild traits, such as are shown in the Belgian, are those with which we are least familiar and which are therefore most intensely interesting.

A fourth reason is the fascination of mating individuals so as to secure best results in the progeny. This appeals to the scientific turn in every man's brain. It is a well known fact that a type may be fixed in six generations—that is to say, you may take an ordinary animal, say a cow or a mare, and by mating with an improved specimen of the opposite sex produce better offspring than the mother. Repeat this process six times and you have an animal which is entitled to registration as a thoroughbred. This could be done in the case of

the Belgian in less than two years. Whether carried to this extreme or not, the improvement of the species has for any man with a talent for this sort of development a most profound interest besides the absorbing excitement of a legitimate speculation.

All of these reasons are founded in the more esthetic and refined phases of the industry. Besides these there is the commercial side. The Belgian, so far, has uniformly afforded a profit. In this country the highest profits have been in the best stock, that taken up by the "fancy," so-called. But as a producer of delicious meat the Belgian has no equal, for the size of the animal and the cost of meat-producing stock. The meat is all white, tender and sweet. It has no "wild" flavor, but is very similar to the best chicken or turkey, with enough difference to make it novel. One doe will readily produce six litters a year, averaging eight to the litter. These will average at birth three ounces in weight. In fourteen days they will increase in size five or six times, then weighing from fifteen to twenty ounces. From this point they will gain a pound a month to five or six months, at maturity from six to eight months they will weigh eight or nine pounds each. This meat sells readily at 25 cents per pound dressed. Allowing one-third for waste a doe will produce in one year 252 pounds of meat, ready for the market and readily salable at 25 cents per pound. This amounts to \$63. The first cost of the doe will not exceed \$15 and her keeping for the year will be not more than \$3. This leaves a clear profit, over cost of animal and all, of at least \$45, and the original investment is still left. This is a very moderate estimate. It has been far exceeded in some instances.

We must not lose sight of the value of the pelts which are worth from 25 cents to \$1 each, according to their beauty, the place at which they are sold and the use for which they are intended. In the East there are some extensive establishments raising Belgians prin-

cipally for the purpose of manufacturing the hair of pelts into silk hats. They are also made into rugs, muffs, mittens, gloves, collarettes and cloaks for ladies' and children's wear. These are very handsome. Dealers abroad have a process of "plucking" by which some of the hairs are removed, leaving on the remainder of the fur a rich, seal-brown color and luster. A machine has recently been invented which accomplishes the same result without plucking, simply by cutting off the dark tips of the fur. This process involves no coloring or artificial dyeing, although there is another beautiful product, known as "electric seal," which comes from a process of dyeing. The pelt of the up-to-date high type Belgian is worth several times as much as the pelt of the common class of Belgians.

PRESENT STATUS OF THE BELGIAN HARE.

In England there are many clubs of Belgian hare breeders who hold large annual exhibitions and offer numerous prizes of money, cups, etc., for the best specimens. In fact, this industry has now been developed to a point in England where large amounts of capital are invested and rabbitries exist in every part of the kingdom. English breeders have been very persistent and enthusiastic in their constant efforts to produce higher and better types. Many of their fairs are open only to limited areas or districts and these smaller fairs are held very frequently, usually lasting only a day or two or three days. The winners at these district fairs are all placed on exhibition at the great Crystal Palace show, which is the crowning fair of the year and is held in the magnificent Crystal Palace at London. The highest prize given is the Crystal Palace cup, valued at \$250, and the winner of this becomes the acknowledged champion of the year. We present herewith a cut of this cup. This must be won at three successive exhibitions to entitle its holder to its ownership.

In recent years, Germany, France and Austria, as well as the United States have become greatly interested in breeding the finer types of the Belgian and the demand thus created has drawn heavily upon the resources of English breeders and has raised the prices in England to a mark that seems extravagant. Three hundred dollars, or even more, have been paid for single specimens, to which price must be added the cost of bringing them to this country. The hare first attracted attention in America about nine years ago. A few specimens were exhibited at the World's fair, and later, at many poultry shows. But no great interest was aroused until within four or five years. Now there are several associations throughout the country. Several large exhibitions have been held in Boston, New York and other Eastern cities, and at Los Angeles, in February, 1900, was held the largest and most successful exhibition ever held anywhere, with the highest prizes. Los Angeles has thus become, within the past two years, the center of the Belgian hare industry in America. And within this period of two years at least fifteen hundred rabbitries have been established in Southern California, a section having a population of only about 300,000 people.

THE AMERICAN STANDARD OF EXCELLENCE.

The American standard of excellence for the Belgian hare is identical with the English standard, which has been in vogue for several years. It is as follows:

DISQUALIFICATIONS.

1. Lopped or fallen ear or ears. 2. White front feet or white bar or bars on same. 3. Decidedly wry front feet.
4. Wry tail.

A specimen should have the benefit of any doubt.

COLOR.—Rich Rufus-red (not dark, smudgy color,) carried well down sides and hind quarters, and



Reduced fac-simile of the Crystal Palace Challenge Cup won by Fashoda at the great Pet Stock Exhibition in London, England, November 1st, 1899.

as little white under the jaws as possible	20
TICKING. —Rather wavy appearance and plentiful	15
SHAPE. —Body—long, slim well tucked up flank, and well ribbed up; back slightly arched; loins well rounded, not choppy; head—rather lengthy; muscular chest; tail—straight, not screwed; and altogether of a racy appearance....	20
EARS. —About five inches, thin, well laced on tips, and as far down outside edges as possible; good color inside and outside, and well set on	10
EYES. —Hazel color, large round, bright and bold	10
LEGS AND FEET. —Forefeet and legs—long, straight, slender, well colored and free from white bars; hind feet as well colored as possible	10
SIZE. —About eight pounds	5
CONDITION. —Not fat, but flesh firm like a race horse, and good quality of fur	5
WITHOUT DEWLAP.	5
Total	100

DESCRIPTION.

The above standard applies only to the popular type of the Belgian, which might be designated as the fancy, or exhibition, type. There is another type known as the heavyweight Belgian, which is the practical meat-producing type. Another variety which is sometimes confused with the heavyweight Belgian, is the Flemish Giant. There is a vast difference between these two in color, markings and quality of flesh. There is also a difference, well marked, in favor of the heavyweight Belgian, between these two, as regards spirit, activity, alertness, style in general, vigor and longevity.

Some points in the above standard will be as unintelligible as Greek to the uninitiated unless explained. The "Rufus-red" color referred to is very clearly defined upon the body of a genuine Belgian of the latest type, but it is difficult of description or of understanding except by actual sight. It is, however, a very rich color, with a most beautiful and peculiar luster. The "ticking" is a tipping of black upon the end of each hair over portions of the body. This, as stated, should be wavy and heavy and abundant. The "lacing" on the ear is a band of black such as might be made by a wide pen stroke with a pen dipped in jet black ink. It extends from the tip about half way down the ear on each side. The back of the ear should be the coveted "golden tan" shade, extending close to this lacing. There should be a tint like a Gold of Ophir rose between the ticking of the sides and the snow white of the belly. Some specimens also have a creamy or golden tan shading under the jaws, which is very beautiful. The tip of the tail should border on golden tan, with snow white underneath. The feet must all be a deep red, both the front feet and the hind feet. This is an exceedingly difficult shade to obtain and almost as difficult to describe. It resembles mahogany, but has a brighter luster. It is like a wine color, but not as deep a shade. It might be called maroon, but is a little darker. Whatever it may be called, it gives a finish to the whole effect as yet rarely seen upon Belgians in this country.

In any way that you regard the harmoniously blended colors of the true belgian, his coat is a marvel and a delight. At four months of age he moults and takes on a permanent coat which is at its best at eight months, but will deepen in the beautiful shades in his next coat, which appears at about the twelfth month.



FASHODA, CHAMPION OF THE WORLD.

CHAMPION FASHODA is by Champion Edinboro, dam by Fairy King. Imported by, and property of the Bonanza Rabbitry. His English record is as follows: Winner of first and special at Batley, Thorn, Bishop Auckland, Cudworth Ashton-under-Lyne and Tunbridge Wells; first at Barnetby and Ossett; first special and cup at Middlesbrough; first and cup at Caterham, Leicesters and the Crystal Palace; four medals, making the total of twelve firsts, seven specials, four medals and four challenge cups, including the Crystal Palace Cup, of 1899—a record never before equalled on the English Exhibition Circuit.

The above cut is a correct picture, from a photograph, of Champion Fashoda, the latest gem of two continents, winner of the Crystal Palace cup in November 1, 1899, and of the international championship, one hundred dollars in gold, at Los Angeles in February, 1900. Fashoda is a marvel, not only in color, markings and symmetry of form, but also in his alertness and bouyancy of spirit. He is of unusual intelligence which is manifested both in his appearance and in his adaptability to handling and posing. He is a very appreciative pet. We present this cut of Champion Fashoda as a study of the latest and highest type of the Belgian.

STANDARD OF EXCELLENCE FOR HEAVYWEIGHT BELGAIN HARES.

DISQUALIFICATIONS.

1.—Lopped or fallen ears. 2.—White front feet, or white bar or bars on same. 3.—Decidedly wry front feet. 4.—Wry tail. 5.—Mature specimens weighing less than ten pounds. A specimen should have the benefit of any doubt.

COLOR.

Ticking should be moderately plentiful and quite wavy, ranging in quantity in the importance of the order in which the sections are here named—viz., hips, back, upper sides. It should not extend to lower sides, over shoulders, nor on breast, and front legs.

Special sections, a deep cream color under jaws, a bright cream color under belly, and white under tail. Lacing, dense black, extensive in length, and confined closely to the edge of ear. Color proper, rich Rufus red, not smudgy, and free from dense blue undercolor.

SIZE.

The animals should be long in vertebrae (between couplings,) long in limb, have ears 5 1-2 inches, and possess large eyes. Weight, eleven pounds.

SHAPE.

The head should be long and moderately coarse; the ears not to thick; the eyes round and bold; breast, full with evenly-carried dewlap; front legs and feet, coarse, heavy-boned, straight and firm in bone and joint; body round and massive, a continuous arch carried from back to tail, with no tendency to squareness on rump.

CONDITION.

The flesh should be firm; the fur in good, healthy condition; the animal moderately close-coated and tight-skinned, thus giving it an active, alert appearance.

SCALE OF POINTS.—VALUATION. COLOR.

Ticking, quantity	5 Points.
Ticking, quality	5 Points.
Back	4 Points.
Sides	4 Points.
Hindquarters	4 Points.
Jaws	2 Points.
Lacing	2 Points.
Ears	2 Points.
Eyes	2 Points.
Shoulders ...	2 Points.
Belly	2 Points.
Front legs and feet	4 Points.
Hind legs and feet	4 Points.

SIZE.

Length of Vertebrae	4 Points.
Length of Front Legs	4 Points.
Length of Hind Legs	4 Points.
Length of Ears	2 Points.
Size of Eye	2 Points.
Weight of specimen	4 Points.

SHAPE.

Head	4 Points.
Breast	4 Points.
Front Legs and Feet	4 Points.
Ears	4 Points.
Eyes	3 Points.
Body	3 Points.
Rump	3 Points.

CONDITIONS.

Flesh	4 Points.
Fur	4 Points.

QUALITY.

Fur	3 Points.
Skin	3 Points.

Total100 Points.

Official weight at maturity, 11 pounds;
official age at maturity, 11 months;
official cut for lack of weight, in mature specimen, 1-2 point to the 1-4th pound, or fraction thereof; and, in immature specimens 1-2 as heavy a cut, calculating them to weigh a pound for every month of age.

SCALE FOR RATING FAT HARES.

(Dressed Carcass.)

Best portion of carcass (ham and loins)	20 Points.
Quality of flesh, size of bone considered	20 Points.
Color of flesh and fat	20 Points.
Degree of fatness	10 Points.
Weight	20 Points.
Manner of dressing and preparing for shipment	10 Points.

Total100 Points.

The heavyweight Belgian has been developed in America by breeders anxious to promote the strictly commercial, or meat-producing qualities of the Belgian. Some unusually large specimens imported from Europe were utilized, crossed, fed and managed with this idea in view. The result has been a hare much larger than the standard-bred, but coarser in bone, quality of fur and of flesh. When slaughtered for food the heavyweight loses a greater proportion

in weight by waste than does the standard-bred. But this fact is undoubtedly due to a lack of well-directed effort in the selection of specimens for mating. More skillful mating would doubtless secure firmness of flesh, close-fitting skin and a soft and fine coat, a small head and fineness of bone similar to these desirable qualities possessed by the high-type specimens regarded as the fancy class. When the hare industry settles to a selection of the general utility hare, one adapted to canning, and supplying the tables of restaurants, hotels and families and for propagation in large herds, as hogs are grown in some sections of the country, the heavyweight Belgian will be found the most available type.

STILL ANOTHER TYPE.

The Leporine, already briefly mentioned in our introduction, is still another type of the product of mating the rabbit. He is large and coarse in bone, reaching a weight of from fifteen to twenty pounds, but he possesses more life, is longer in body, more like the typical Belgian, has firmer flesh, and has a more racy appearance than the squatty, Flemish Giant. This type will unfur breeding heavyweights for meat-doubtedly prove valuable as a foundation making purposes. Like the Flemish he possesses no beauty. Nothing about him is attractive. His color is dull, a light drab, and has none of the markings either of the standard-bred Belgian or even of the best heavyweights, which do possess not a little beauty. The Leporine is most abundant in Belgium and the south of France, where his general utility purposes for the table and for canning are the chief aim. In some sections of these countries the Leporine furnishes the chief meat supply of the population, over a ton of meat a year being sometimes the product of a single pair and the litters from the earlier breedings.

THE HARE AS A MARKETABLE COMMODITY.

As an article of diet the hare has advantages as yet very slightly understood in this country. The flavor of the meat is delicious, far finer than that of the best poultry obtainable in this country. All of the flesh is eatable, so that there is absolutely no waste after the animal has been properly dressed. From a dietetic point of view, as will be seen more in detail in a later paragraph, the flesh of the hare is simply invaluable. It lacks the heavy, oily substances found in ducks, chickens and turkeys. The flesh, therefore, while very nourishing, produces no inflammation and may be taken with relish and profit by any invalid. It has none of the strong, gamey flavor found in the wild rabbit and is therefore acceptable to the weakest stomach.

In the cleanliness of its habits the hare is far daintier than poultry. The same fact is true of its food. Poultry will eat almost anything. The hare is fond of variety but will not eat meat or anything that is gross. It will not suffer the slightest stain of earth or other uncleanness to remain upon its fur, but is refined in its every habit and instinct. The result is that, as long as the hare is in a state of health, its flesh is necessarily exceedingly wholesome as well as toothsome.

The Belgian hare will dress a pound for every month of its age up to six or to two or three inferior fowls. Hares from about the tenth week of his existence. The fifth month is about the profitable age to kill if intended for the market. He will sell for twenty cents per pound, dressed weight, which is the regular market price of turkeys. We have sold none for less than this price and have found the demand far in excess of the supply. In some localities the ruling price has been thirty-five cents per pound. The flesh of the hare is a food of which no one ever tires and all

who have tasted it once acquire a liking for it.

By castrating the young heavyweight male hare at ten or twelve weeks of age we may produce a heavy animal dressing from ten to twelve pounds at eight or nine months. These take on flesh very rapidly and grow to a large size. Large numbers can be kept in a single apartment without risks of fights among them. The process of castrating is therefore an economy in respect to the space devoted to rearing. The castrating is simple and not more than one per cent. may be lost. The quality as well as the quantity of the meat is vastly improved by castrating. The market price is therefore higher. People prefer the castrated hare just as they prefer a large fat capon chicken to one that is smaller, or to two or three inferior fowls. Hares are very small boned and their weight is nearly all flesh, differing again from poultry and with the difference in their favor. All of the meat is white in color. The doe may be spayed the same as a sow, and will increase in size and quality as well as the buck. But there is a higher percentage of loss, perhaps two or three, sometimes five in a hundred.

Castration means a gain of from twenty-five per cent. in time required to reach a given weight and nearly an equal gain in the saving of the cost of feed and also a great improvement in the quality of the grain and juiciness of the flesh. The castrated stock bring one-fourth more per pound.

WHAT THE HARE WILL PRODUCE.

No domesticated animal can compare in the relative value of its products, as compared with cost of food and care, with the hare. A small rabbitry to provide food and pin money for a family may be established on the rear of any city lot. From a beginning of five does and a buck it is safe to say that three hundred hare can be raised per year and

the original stock will remain. This estimate provides for no increase from increase. But the first litters, if allowed to increase, would run into the thousands within a year.

Each breeding animal, doe or male, requires a pen by itself. And this should be three feet wide, five feet high and from sixteen to twenty-four feet long, built according to the plans given later in this volume. The space required by these should be duplicated in a space equally as large and sown to alfalfa. This little patch of ground, if cared for, irrigated, and fertilized like a lawn, will produce more green stuff than the hares in the pens can consume, and sufficient to store away for hay during those winter months when the growth of the alfalfa is slow. Such a rabbitry, so far as the meat question goes, will more than make a large family self-sustaining on the meat proposition. Surplus hares can readily be exchanged at the market for roasts of beef or mutton, or for poultry, or may be sold for hard cash. There is no trouble about the demand. The difficulty is to bring the supply up to the demand wherever the dainty flesh of the hare has become known to consumers.

Meat is constantly increasing in price owing to the increased cost of production as the great ranges of the West are cut up and utilized for agriculture and horticulture. Any small space of land may be employed for a rabbitry, and old people, children, ladies, professional men, all who have a little leisure every day, may enter upon this pleasant and profitable employment of rearing hares. The does are readily domesticated and bear handling. They will breed until six or seven years of age, although they are not as prolific after their fourth year as they are up to that period. They are in their prime from their eighth month to their fourth year. A doe belonging to the writer produced in one year eighty healthy young ones, all of which were reared

and eaten or sold. Estimating that these were kept to an average of six months and an average weight of five pounds, this doe produced four hundred pounds of choice meat within a single year. All this was within twenty months of her birth, and, at the end of the period, she was alive, healthy, in good form and of greater value than at the commencement of the breeding. Neither poultry nor cows can reach such a marvelous record of profitable production, on the same feed and same care, as that attained by this unpretentious but valuable little animal.

FECUNDITY OF THE HARE.

The hare is a species of rabbit; and the astonishing fecundity of all members of the family is universally understood. Everyone has read that, imported into Australia, the English wild hare overran the country and threatened to destroy every green thing by sheer force of numbers. We have all heard of the devices for killing them by poison and starvation. Yet this was the wild hare which only drops two litters a year and one pair at each litter. Nevertheless, his powers of reproduction were enough to stagger the Australian government, which offered a reward of twenty-five thousand dollars for any certain method of exterminating him. Now, the Belgian has from five to six litters a year and from eight to fifteen at a litter. Had the Belgian been turned loose in Australia instead of the wild hare, there is no telling what the government would have been driven to do.

The following interesting table shows the possible increase from a single pair of Belgian hares for five years, assuming that all lived for whatever period intervened between their birth and the end of the five years. The calculation is based upon a single pair of Belgian hares, six months old, to start with, allowing each doe of the progeny to drop her first litter at six months of age, and the litters to average eight,

the sexes being equally divided. A well-cared-for doe will breed until she is four or five years old. The calculation ends with the fifth year. So prolific are these animals that, if permitted, a doe will drop a litter every thirty days all the year round, but in making this calculation they are only credited with six litters a year, or half the full producing capacity:

FIRST YEAR.	No. Born.	Total No.
September 1	8	10
November 1	8	18
January 1 ..	8	26
March 1	40	66
May 1	72	138
July 1	104	243

SECOND YEAR.

September 1	264	506
November 1	552	1,058
January 1 ..	968	2,026
March 1	2,024	4,050
May 1	4,232	8,282
July 1	8,104	16,386

THIRD YEAR.

September 1	16,200	32,586
November 1	33,128	65,714
January 1 ..	65,544	131,258
March 1	130,344	261,602
May 1	262,856	524,458
July 1	525,032	1,049,490

FOURTH YEAR.

September 1	1,046,408	2,095,898
November 1	2,097,832	4,193,730
January 1 ..	4,197,960	8,391,690
March 1	8,383,592	16,775,282
May 1	16,774,920	33,550,202
July 1	33,566,760	67,116,962

FIFTH YEAR.

September 1	67,101,128	134,218,090
November 1	134,200,808	268,418,898
January 1 ..	268,467,848	536,886,746
March 1	546,872,360	1,083,759,106
May 1	1,073,675,592	2,157,434,698
July 1	2,147,746,994	4,305,181,682

A brief calculation shows that, allowing each hare only two square yards of space, it would require for the above number 278 square miles. Allowing an equal amount of ground for the purpose of raising hay, grain and roots to

feed the hares, we have a total of 556 square miles, a good-sized ranch, almost as large as Orange county, Cal. However, supposing the hares were only worth \$1 apiece—the price would probably fall off a little with such a large stock on the market—the owner of this stock could well afford to buy Orange county, including all the improvements, and then could build the Nicaragua Canal, pay off the public debt of the United States, build 100 firstclass battleships, give \$25 to each man, woman and child in the United States, and still have left a neat little fortune of about \$1,000,000,000.

Now take the product of two does and a buck for two years. This would be the product of one doe doubled. Thus two does and a buck would have produced, in two years, 32,769. Doubling this we have the product of four does and a buck for the same period, amounting to 65,538. While this result would probably never happen in its entirety, yet the illustration shows the possibilities of the industry.

ANOTHER INTERESTING COMPUTATION.

The above table of increase as given in the first edition of this manual attracted so much comment and attention, having been extensively printed in other publications, that we have thought it would be of interest to present the following estimate of the possible profits of the Belgian industry. This estimate is along the lines of the table already mentioned, and based upon a state of affairs approximating the ideal. But we believe it to be reasonable and fully within the bounds of possibility.

Without doubt, hare meat may be produced, on a small scale, at a cost of not more than four cents per pound. Hares may be kept in any backyard. Not so with cows, hogs, or poultry, to an extent that would leave any profit to speak of. With the greater net profit in hares over any other live stock,

the poor man may purchase in abundance all of the commodities produced by cow, hog, or poultry.

When, from the labor of a boy not more than twelve years old, an income of over one thousand dollars a year is realized, certainly the possibilities for a grown person are very flattering. It is no exaggeration to say that a wide-awake, methodical man may, by devoting his entire time to the care of hares, make per year from ten to twenty thousand dollars from the meat for market only. With a well-appointed paddock system of rearing, water piped and all conveniences, a man can care for one thousand breeding does, dress and ship the increase.

From this herd of one thousand does should come fifty thousand hares each year. At five pounds each, dressed, and at twenty cents per pound, they would bring fifty thousand dollars. For safety, cut this estimate in half and then deduct twenty per cent. more. The balance is twenty thousand dollars. The expenses will not exceed five thousand dollars per year. So we have fifteen thousand dollars net profit.

To many this estimate will seem unreasonably high. So we will reduce the price of meat to five cents a pound. This basis brings us twelve thousand and five hundred dollars. Deducting expenses, we have a profit of seven thousand and five hundred dollars, for one man's yearly labor.

"Too high, still," some people will say. Cut the price of the meat to two and a half cents a pound. This still leaves us six thousand, two hundred and fifty dollars, gross, or a profit of twelve hundred and fifty dollars, or over one hundred dollars per month the year 'round.

But hold! We have overlooked the item of the pelts from these fifty thousand hares which we skin before we market them. At forty cents each we have twenty thousand dollars for these. So we now have an income of twenty-one

thousand, two hundred and fifty dollars, after paying all expenses. The pelts can easily be made to bring eighty cents each, by dyeing them black. This would bring up our income to forty-one thousand, two hundred and fifty dollars, per year, for one man's labor in caring for a thousand does. We shall have to make another cut and call the meat only one cent a pound, which brings us down to thirty-six thousand, two hundred and fifty dollars.

Still this will seem too high for some conservative people who are easily frightened by figures. So we will add six thousand dollars to the expense account and call the net income thirty thousand. But, by employing a few men to help do the work, and holding the does in the first two litters, each year, and allowing these to produce two litters each towards the close of the year, we can realize two hundred thousand dollars. This is on a basis of ten cents per pound for the meat and fifty cents each for the pelts—surely not an unreasonable basis.

Cut this income in two, for expenses, and we have left a profit of one hundred thousand dollars. This calculation is based upon an allowance of six litters per year, which is too low. If—but there is no use in extending this computation further. There seems to be simply no limit to the possibilities of the product from a thousand breeding does. Some day, not very far distant, some section of this country will see a plant which will prove these figures and make a fortune for the owner.

We quote in this connection a paragraph that has been making the rounds of the press. The writer apparently had in mind the common rabbit. But what he says applies to the Belgian with even greater force. Here is the extract:

RABBIT FARMING.

Strangers, especially Europeans, are often surprised at the wastefulness ex-

hibited by agriculturists in this country, while they are complaining of hard times. Take, for instance, the rabbits, which are so plentiful in some parts of California as to be regarded as a nuisance, and a bounty offered for their scalps. In other parts of the world rabbits are made profitable by the canning of their flesh and the sale of their skins. An exchange says:

"Rabbit farming has been begun in Kansas, and promises to be profitable. It is true that they call the rabbit there by the more impressive name of 'hare,' but he is the same old bunny, nevertheless. A Mr. Lamphier is the pioneer rabbit farmer, but now nearly the whole of Kansas City is in the business, and a local statistician declares that in a short time there will be more rabbits in Kansas City alone than there are in all the rest of the State. The meat packers say there is no flesh so well suited for canning purposes as that of the rabbit, and that when properly put before the public it will bring fair prices. The pelts are valuable, too—are worth as much as 25 cents each—and are capable of being dressed up so as to look like almost any other fur than that of the despised rabbit."

THE RABBITRY.

We emphatically condemn the practice advocated by many authorities of building little, cooped-up hutches, set up from the ground, for the hare. The hare requires not only air and food but plenty of exercise and close contact with the earth. In a wild state he roams the earth and is the most healthy of animals. It is his nature to have wide room for exercise. Exercise is an antidote to a surplus of fat and sickness. It tends to produce not only the finest animals from the standpoint of the fancier, but the healthiest as well. Anyone who stops to think for a moment about the habits of the hare, as nature intended him to live, will see the force of this reasoning and will realize that,

in his domesticated condition, he should be kept as nearly as possible with surroundings similar to those of his wild state. To confine the hares in such small apartments is equal to sacrificing fully one-half the income that may be derived from them when managed as we recommend. Hares reared in the "box hutch" do well if they dress one and a half pounds at two and a half months of age. By our method of management we get three pounds of a far better quality of meat at the same age, and a mortality loss not to exceed six or eight in a hundred of those dropped, while by the "box-hutch" method, fully fifteen out of a hundred die. Our youngsters travel the length of our twenty-four-foot pens several times a day when fifteen to twenty days old. They are vigorous, because of the extra freedom and exercise enjoyed by their dams from infancy to the delivery of the young. They are a very active animal, and should not be deprived of this, the most prominent feature of their nature. Give them exercise on the earth, and less drugs, and a smaller graveyard will be needed.

We give herewith directions and specifications for constructing two rabbitries, the first a smaller affair, for beginners and those who are not decided as to the extent to which they will engage in the business of rearing Belgians. This rabbitry may be made larger or smaller according to circumstances. Our second and more elaborate plan is for what we consider a model rabbitry, large enough for a somewhat extensive business and equipped with every convenience.

The six-pen rabbitry which we describe here will do very well for a trio, two does and a buck, up to the time that the second litters are ready to wean. By that time the owner will probably be enthusiastic enough as a fancier to desire to extend his plant, and the location should be so planned that an extension can be readily made, if desired. As regards cost, we may say that the figures given are Los An-

geles prices, which will vary in other localities. In some places the cost will be higher; in others it will undoubtedly be less.

Before constructing the pens, a roof should be set over the place selected for the rabbitry. This roof should be at least ten feet from the ground at the ridge and seven feet at the eaves. The roof at the gables should project three feet to protect outside pens. The roof should be pitched in two directions as a single-pitched roof permits the sun to come in at least half of the day. The roof may be made of shakes or boards. A cheap way is to overlap boards laid lengthwise on rafters. In this way the rafters can be put two or three times as far apart as they would need to be if shakes were used. Only light stuff, 2x4, is required for the rafters. They may be placed six feet apart and will hold the roof for several years in good shape.

In each pen at the side of the building, that is, six feet from the inner door, a wooden door should be placed, at least five feet high, for convenience in passing through. This door protects the hares from draughts and stormy weather and should be closed at night excepting in very warm weather. Thus the hares will have a protected pen six feet long. Over this six feet a floor should be provided, either permanent or portable. This is especially necessary in winter. In place of the wooden door, canvas, or even burlaps, may be used. This may be raised and fastened at the sides in pleasant weather and dropped during cool or stormy weather and at night.

On the ground, under the roof, you place your hutches, dividing the space roofed over the into subdivisions 3 either by 16 or 24 feet. The pen should extend at least 8 feet beyond the roof, giving the hare a chance to sun himself when he feels like it, as will happen often in cool weather, or even mornings and evenings in the summer. We like the manner of making panels full length

for the sides of the pen. We use strips of Oregon pine, 1x3, and the same material for the ends. These panels should be five and a half feet wide, so that, when they are set on edge, your pens will be five and a half feet high. At this height an ordinary-sized man can walk under with little stooping. Have wire netting, one-inch mesh, two feet wide, from the bottom up to a strip running lengthwise. Above this fill a space three feet wide with two-inch mesh wire netting, which completes the panel. The panels separating the different pens lengthwise must be laced with wire netting to the very top of the partitions. Otherwise the hares will, by jumping upon a feed box or getting a start in some other way, climb over from one pen to another, and then there will be trouble, for each hare brooks no intrusion upon his privacy.

Having constructed your panels and being ready to place them in position, put two-inch wire netting upon the bottom of each pen and fasten securely to the edges of the panels. This is to prevent burrowing and takes the place of the cement floors advocated by the constructors of rabbitries in the East, yet allows the hare to live on the ground which is indispensable to health and thrift in the greatest degree. Leave no place unfastened where the hare can break through. Cover over the top of your panels, when in position, with two-inch wire netting to keep out cats and dogs. Cats will enter the pens and take the young hares, from a day old up to five or six weeks. Dogs will kill any of them, old or young. The object of using one-inch netting for partitions and siding is to give sufficient strength to guard against cats and dogs and also to prevent the young hares from going from one pen to another. One doe will at once destroy the young of another.

For extremely warm localities, such as the San Joaquin and Sacramento valleys, Arizona and the Southern

States, where the air is dry and the temperature high for long periods, the following device will be found of great benefit, affording the hares a refuge from extreme heat:

Now take a large-sized cracker box, 24x14x16 inches. This will make an excellent basement, or cellar for the pen, when the top of the box is removed, a pit dug and the box is turned over into the pit. Put a trap door into the box after it is sunk level with the surface of the pen. Cut a hole in the end of the box nearest the end of the pen. Make this hole about six inches wide and a foot high. Now dig a runway into the earth so that the doe can enter this box through this opening. There she will make her nest and "kindle," or bring forth her young.

In making the pens, the bottom of the doors should be hung at least a foot from the ground, and it is best to have a spring on the doors, so that, when you enter the pen the door will close after you. Or, if the latch or fastening becomes loosened, the door will still be closed. A common spiral screen-door spring serves the purpose. The advantage of having this pit is that there is

always a little excess of cool air and moisture in it during heated terms. Be sure to carpet the bottom of this pit and also the runway with the two-inch mesh wire netting. Otherwise your doe will dig out and be lost or come to grief. The bucks dig very little, although they will help a doe dig if they are in the same pen. Cover the bottoms of the pens with dirt two or three inches deep, so that the hares may dig until they reach the wire netting underneath the earth. This gives them something to do and is no detriment. Your rabbitry is now complete.

After October the runway to this box should be covered up and filled with earth so that it will be impossible for the doe to enter the box. Place another box right over it with a floor set up three inches from the ground, on legs nailed to the corners of box. Make a double-pitch roof to box so that she can have a perfectly dry place. There will then be no risk of the young drowning, an accident which might occur in the summer cellar. We now have a home for our rabbit, which fills the requirements as nearly as is possible in a state of captivity.

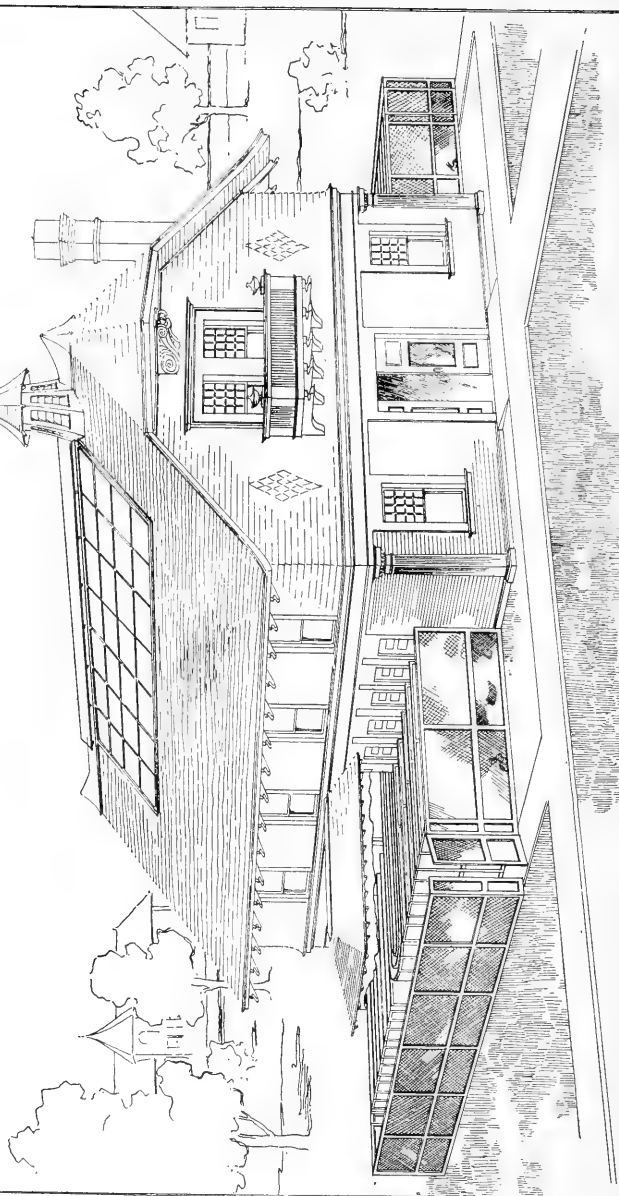
Our Complete Plans for Rabbitries.

Believing that the most effective and satisfactory method of conveying information is by direct and compact representation to the eye, we have had five drawings prepared of our designs for model and practical rabbitries. We present herewith reduced fac-similes of these five drawings. Two of these represent a perspective view and a ground floor plan of a cheaper rabbitry. The others are a perspective, a ground floor plan, and a sectional view of our model rabbitry. A moment's study of these plans will show the conveniences and utilities which we have embodied in

these designs. In the plans of the model rabbitry the reader will notice the capacious runs for the hares, the exercise and burrowing pens, the inner hutch in the alley, the space available for hay and grain, the office, workshop, where crates and other essentials may be constructed, repairs made, and the general effect of completeness in every detail.

We also illustrate the most practical watering devise for a large rabbitry. As regards architecture, the style of this may be varied to suit the taste and purse of the prospective builder, difference in climate and location, etc. The cost,

PERSPECTIVE - MODEL RABBITRY



—HOWARD TRAIN & WILLIAMS—ARCHITECTS—
LOS ANGELES—CAL

Designed by *Dr. B. L. Platt*

of course, would depend largely upon the material employed and the finish of the building but from these plans any contractor can prepare an estimate of cost in accordance with the wishes of the prospective owner. There are two points which we especially desire to emphasize. The first is the convenience and economy as a business proposition in having so well equipped an establishment as that called for by our designs. Every phase of modern business life calls for concentration of energy and perfection of equipment and the man who goes into the Belgian hare industry with the best preparation is the man who is most certain to succeed, as in all other enterprises. The other point that we wish to call attention to is the gratification of the owner's taste as a fancier in constructing as elaborate a building as his means will permit.

Many of those who are engaging in this industry are persons of large capital who can do as they please in this regard. Here is a new field for the exercise of originality and enterprise. The true fancier will be gratified by having a beautiful home for his pets. A man who always wants the best of everything may have the best here as easily as in constructing a residence or a yacht.

In matters of detail, especially of ornamentation, there is room for great variety. The business, too, will receive a new impetus when commodious and substantial rabbitries are constructed throughout the land, for people will then realize, as never before, that this new industry has come to stay.

We may state that we have had full sized blue-print copies taken of these designs and will forward to any address a full set of both designs for one dollar. These are drawn on a scale of 1-4 of an inch to the foot and full specifications are given, the whole being the product of strictly-first class architects.

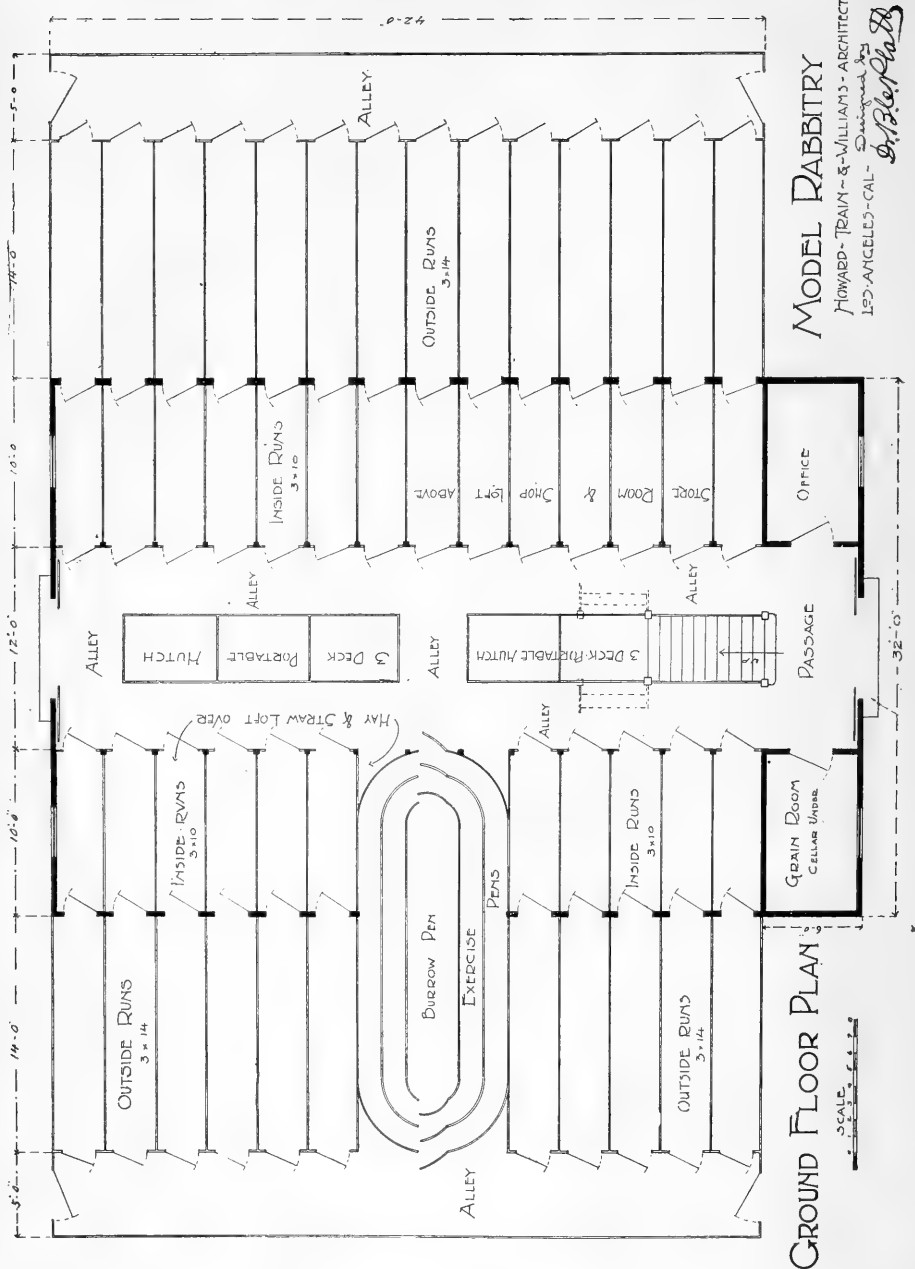
Our plan for a model rabbitry, as

given herewith, is based upon the ground-floor, open-air system of management, but with a modification of the box-hutch method added to provide quarters for a large number of hares within a given space. If ground-floor quarters were to be given each hare, all the time a modern rabbitry would cover a plot of ground much larger than most breeders would care to devote to it, and would be correspondingly difficult to care for.

Hares reared in close confinement will, for a time while young, make rapid growth, adapt themselves to circumstances, as is customary with youth exhibit a very fair degree of spirit and a fair condition of health up to five or six months of age. This is true of the strongest of the litters; or, in other words, survival of the fittest obtains under such conditions. Still there will be a larger proportion of losses among hares when reared under this management than when allowed as much freedom as possible and as many other advantages as is consistent with a state of captivity.

The fact that there has been success to a certain extent in rearing hares in close confinement has led to the almost universal practice. Few people keep any close account or make a thorough study of the advantages of the two methods. Consequently they are unable to determine which is the better, the box hutch system or the ground-floor, open-air method of management. A close account of births and deaths and also of feed and labor shows clearly that the latter method has an advantage of at least 50 per cent. over the former.

As a matter of convenience a three-story high, box-hutch arrangement is necessary as a part of a well-appointed rabbitry, as will be described hereafter. A model rabbitry, will be built in the following manner: First, choose a level spot upon which to place the building. Locate the building facing east and west,



so that pens may be run out at both sides of the building. The pens facing the east will get the sun one-half the day and those on the west one-half the day. And also so that it will be convenient to get around the outer ends of the pens with a wheelbarrow or hand cart for the purpose of cleaning and furnishing fresh loam to the pens. Make your building with a frame forty-eight feet long, thirty-two feet wide, with posts at least sixteen feet high. A floor may be placed over the entire bottom if desired but should be at least ten feet back from each side, leaving an aisle which should be twelve feet wide. On either side of this aisle should be a row of pens three feet wide with doors opening into the aisle. At the side of the building, ten feet from this aisle, have another door to each pen and make these pens not less than twenty-four feet long, ten feet within the building and fourteen outside. At the bottom of the doors at the side of the building make a small opening suitable for the hare, say 8x14 inches, or the width of a board 10 or 12x14 inches.

Have this door arranged to drop with a flap of canvas, ducking, or any cloth protection, also with a board. In stormy weather, or when heavy winds prevail, the door may be closed and the smaller opening, if desirable, left so the hares can go through underneath the ducking and yet prevent a strong current of wind from blowing into the inside pen.

Have the sills of the doors opening to the aisle at least one foot from the ground. Hang the doors with spring hinges. Hares rarely ever jump out of a pen constructed in this way while the doors are open during feeding or other work, but with a door opening even with the floor they will run out, necessitating much watchfulness and care in closing the doors each time one enters the pens to water, feed, clean, etc., and there is also danger of injury

to the hares in closing a door. Sometimes the hare is caught in the door by the foot, sometimes by the tail or head and often hares are killed especially the young ones.

Make the doors opening into the aisle of screen wire, also the space below each door from the sill down of screen wire. This allows a free circulation of air on a level with the head of the hare.

Now, we have on each side of this aisle fourteen pens 3 feet wide, which take up 42 feet of our 48-foot building. Make one cabinet 16 feet long, 4 feet wide and 6 feet high, outside measurements, floor of 1-2 inch stuff at the bottom, another one up two feet, and another one two feet higher still, or four feet from the bottom. Divide the space above each floor lengthwise with one-inch mesh wire. Now divide each section above the floor crosswise twice, making three apartments five and one-third feet long by two feet wide on each floor, or eighteen apartments of this size in a cabinet. Use dressed lumber, seven-eighths inch, dressed one side and edge for the frame, making the corners of three and four inch strips.

Make the stringers running lengthwise and those crosswise and those on the outside of the frame four inches wide. On the top of the outer edge nail for a plate a strip to strengthen to the edge of the upright stringer running lengthwise and crosswise. On the bottom use a 1x3 hard wood of some sort for a shoe, rough stuff, champered at the ends. This is to serve as shoe in moving this cabinet, to admit of placing a roller under it easily and to stiffen the frame. Sliding doors should be full length of each apartment, that is, made so as to run open full length of each apartment. Use one-inch mesh wire on the sides, tops and ends of partitions and in doors all the way through, double selvedge wire is best as it may be stretched so taut as to fairly ring. This

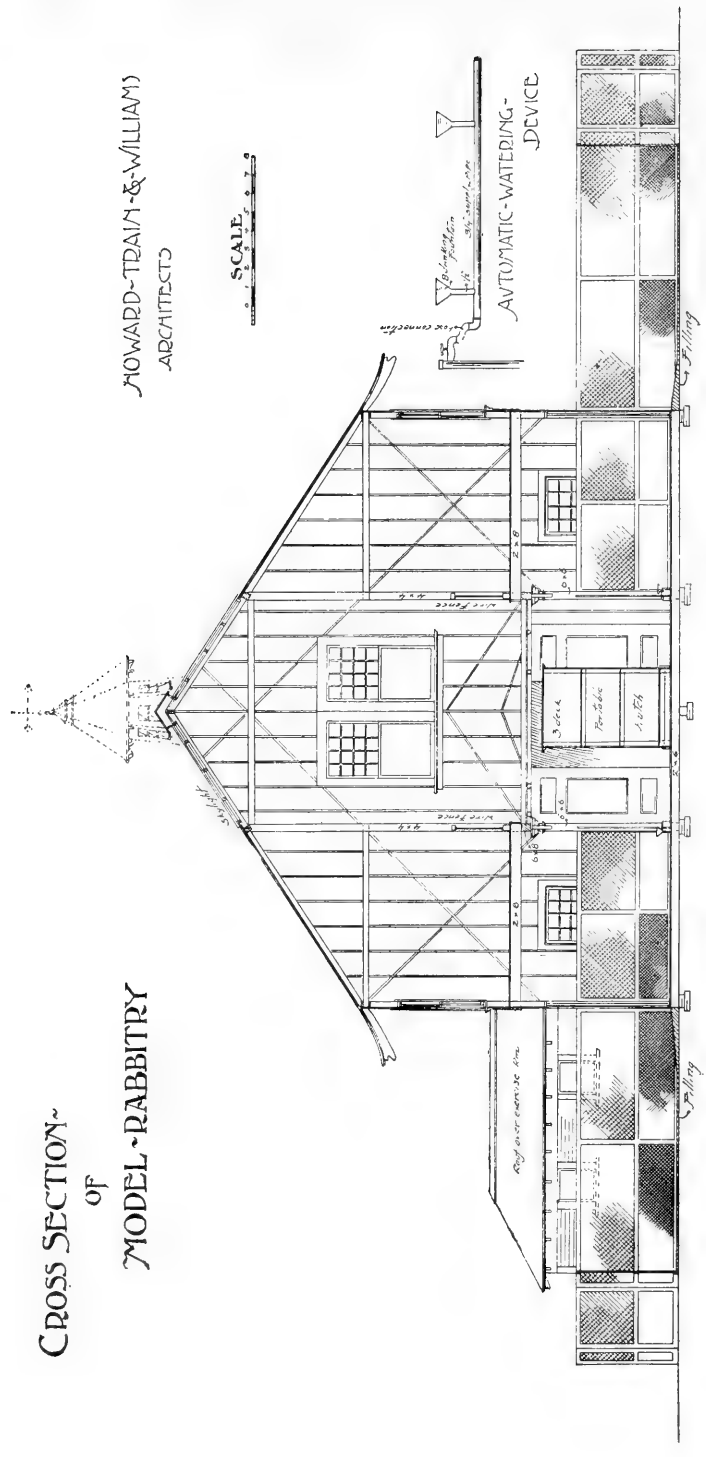
CROSS SECTION~

of

MODEL-RABBITRY

HOWARD-TRAIN & WILLIAM
ARCHITECTS

SCALE
1" = 8'-0"



AUTOMATIC-WATERING-
DEVICE

Watering
Device
1/2" Watering
Device

strengthens the whole structure, doors as well, and makes them very durable.

Now make one more cabinet of the same dimensions in every respect save that it is fourteen feet long. Place this cabinet in aisle next to the stairs and lengthwise of the aisle. This allows an aisle each side of the cabinet four feet wide. The 16-foot cabinet is to be placed at the end of the aisle, furthest from the stairs allowing a passage way between, from aisle to aisle on either side of the cabinet. The cabinets may be spaced off into small apartments by having a portable cross frame of wire made to hook in and be easily removed. Divide space on each floor into two or three sections the same as with the 16-foot cabinet, as may be desired. It is a good plan to have some long runs in these hutches for breeding bucks or young animals being fitted for exhibition purposes. This cage allows a 14-foot run and in it may be placed one cross-panel a foot high, compelling the hare to jump it as he goes from end to end of the run and this, bucks and young animals will do for the mere fun and scores of times each day. This gives them exercise and helps to develop the long, light, racy form, gives good appetite, promotes growth and a vigorous condition, imparts to their coats a rich color from skin outward and gives luster to the surface of the coat.

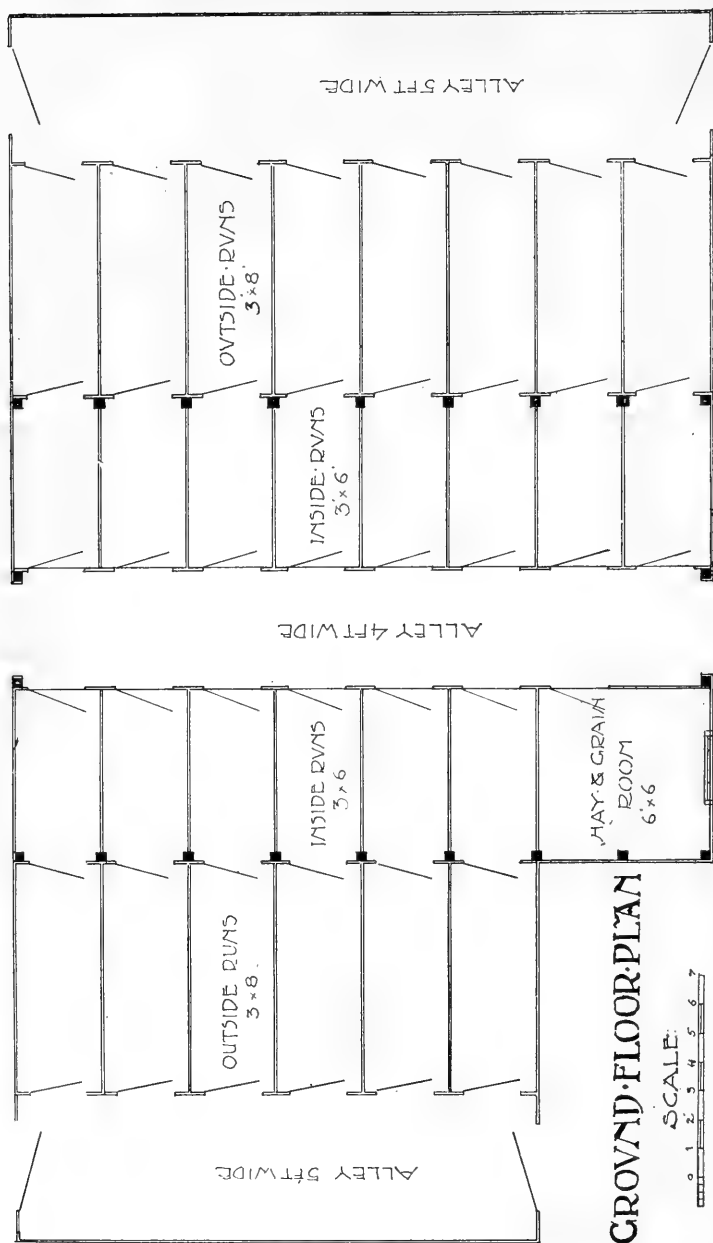
This 14-foot cabinet, used for this purpose, would be better to have only two floors in it and the height between each floor three feet. Then a 2-foot high panel might be placed in the hutch which will give the hares a greater leap and serve for the purpose of training for exhibition. This indoor arrangement for fitting for exhibition purposes is necessary for a short time just before the exhibition, say fifteen to thirty days, the chief advantages being that the hares will, if

allowed their ground-floor pens where they have been raised up to say five to six months of age, often become lazy and indolent and lie out in the sun a great deal even when it is pretty warm, in fall, winter and spring days and the sun will bleach the ends of the hairs of the coat.

Take a hare from his regular home, place him in another apartment side by side with a wire partition between him and another hare, who has equal advantages to travel full length of the apartment, and the two will chase up and down the run and travel miles and miles each day, something that we wish to encourage. In this way, and by grooming daily, and many times a day, we bring the hare to a condition of flesh that is hard like a race horse, the condition required by the Standard of Excellence.

In the construction of any and all of these cabinets, it will be found very convenient to have portable cross panels to divide the apartments. These cross panels may be made of heavy wire about the size of a slate pencil, or perhaps 3-16ths iron, this made into a frame and the one-inch mesh wire stretched over the sides and ends, allowing about one inch play at the top and at both ends which will admit of its being placed and removed very readily. It should also be provided with two or three hooks on each end to allow of its fastening. With this you can divide up your space as occasion requires, allowing them full length of pen or making the space only 2 1-2 feet, confining the hare in this room for a few days at a time when crowded for room, which will do no harm.

To reduce all labor to a minimum, use a pipe for watering, 1-2, or 3-4, or a full inch, lay this on the floor of the pens next to the doors opening into the aisle and let each pen have a stand pipe with a funnel-shaped bowl at the top, about eight inches from the floor, this little funnel to hold about one pint, and



PRACTICAL PLAN OF CHEAP RABBITRY

CAPACITY, 125 TO 150.

the stand pipe to be attached to the main pipe with T's. This should be on a level. The main pipe should be on a level. Now, with a hydrant at one end of the rabbitry, connecting with both rows or ground-floor pens, the 32 pens may be furnished with water by turning one faucet, the water rising in these funnel-shaped cups at the top of the stand pipes. A small stream of water may be allowed to run all the time, an overflow pipe being attached to the funnel-shaped cup at the farthest end to carry off the overflow if, perchance, the supply should become too great, thus avoiding the wetting of the pens and consequent dampness, a condition always to be guarded against.

Earthen and large open water vessels afford an opportunity to the young hares to fall and drown, or, if not drown, to take cold, which often results in either death or a deformed condition. Another objection is that the wind blows dust and dirt into these open vessels, and the hares in the pens kick the filth into the water and it becomes contaminated and, if used, produces serious results to the health of the hares. Nothing is as important as absolutely fresh and clean water.

Eight feet from the ground, place another floor in this building, running a flight of stairs up at the end of alley nearest to the office. Provide the ends of this building on a level with this floor, with large doors to admit of the entrance of hay and straw. Make this floor of matched stuff and sufficiently strong to hold large quantities of loose hay.

Place eave troughs on the building. Make sliding doors of boards at both ends of the ground floor, also inside doors of wire to close up in extremely hot weather, or at times when you wish to throw the board doors wide open, these wire doors preventing stray dogs from entering the rabbitry during absence of manager. The entire end of the lower floor of the building should be so

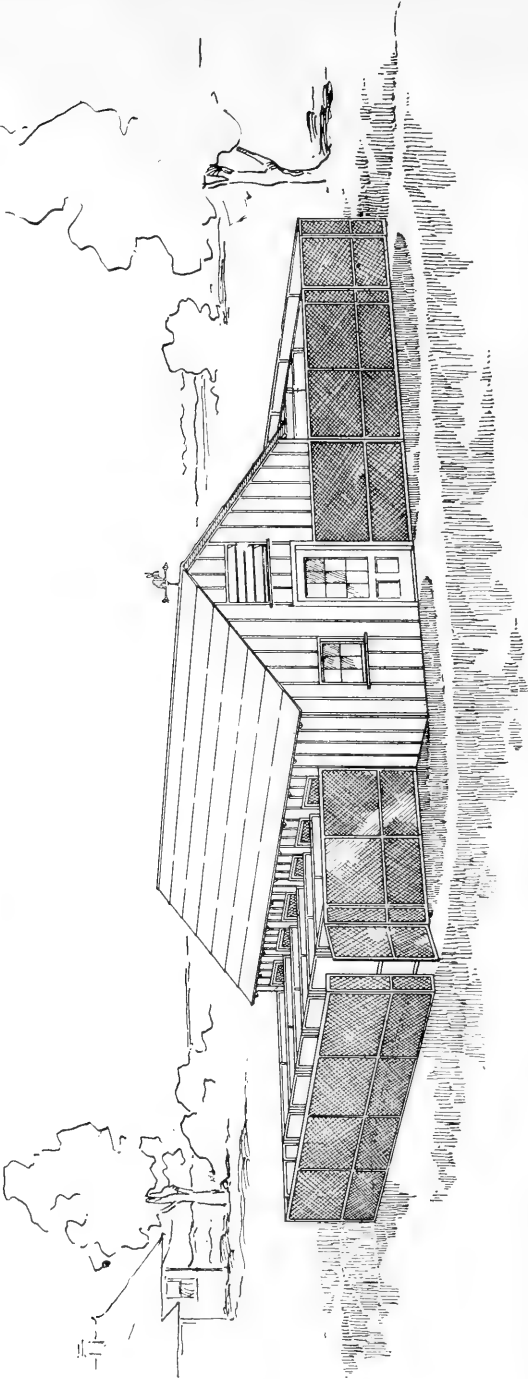
constructed as to enable one to throw it wide open during hot weather, allowing free admittance of air to the building excepting when heavy winds prevail.

A rabbitry of this size contains sixty-two pens; thirty-two cabinet pens and thirty ground floor pens. This will furnish plenty of space for twenty breeding does and the increase, allowing three stud bucks to the herd. The average number of hares that this rabbitry is likely to contain with these breeding does will be two hundred and fifty head. This number of hares will require all the air that will circulate through a building of this size and it should be allowed them except, as stated above, when high winds and fog prevail.

An automatic chute might be arranged and connected with grain bins above, the grain room one that could be shut off at will and is full as long as there is a supply of grain above. One of these should be provided for oats and one for bran, for we may say there is no food as good for the hare as light-weight bran and oats. In the grain room there should be placed some sort of a cooking apparatus such as will permit the preparation of hot mashies and of hot water. This room will be six by eight feet, for this purpose. This room will also be of greatest value in treating hares that take cold or have any similar disease. Placing them in this room and raising the temperature until they are thoroughly warm—as described more fully in our chapter on diseases—is often the only way to preserve their lives. Such an apartment as this, to be used as a nursery and a sanitarium, is as essential to a well-equipped rabbitry as the pens. It may frequently save the life of a hundred-dollar hare.

In preparing this apartment, due care will be taken, of course, to guard against fire by having the chimney well ce-

· PERSPECTIVE · CHEAP · RABBITRY ·



mented and protected by galvanized iron. Full arrangements should be made for ventilating this room.

In dividing off your rabbitry into pens you may either make the partitions solid or construct panels which may afterwards be put in place. If made solid, the upper edges of the wire netting will be attached to the upper floor and the lower edges to the lower floor. The portions outside should be made of panels, as these are more portable and it will undoubtedly be necessary, once in two or three years, to take up the wire netting which carpets the pens, and to stir up the soil, removing three or four inches deep from the surface and replacing this with fresh earth. The continuous use of the same soil for so long a time will inevitably, sooner or later, cause sickness among the stock through poisoning the earth, unless it is renewed occasionally. The same thing is true of fowls, hogs, sheep and cattle when they are kept in close confinement.

The inner portion of the pens, that which is floored, should be covered with a coat of heavy tar or roofing paper to prevent the floors from becoming saturated with the secretions. The same should be used in the box hutches and should be renewed occasionally. Fresh loam should be used on the floors of the ground-floor pens inside and often outside. A good sprinkling of fresh loam sweetens the air. Dust boxes about twelve by sixteen inches in area and three or four inches in depth, with an inch or two of loam, which is preferable to sand, will be used by the hares, if placed in the pens and they are readily cleaned. In the cabinet hutches the hares will lie on this earth a good share of the time, even when it has become filthy to a degree, showing their fondness for getting close to the earth. These boxes can very easily be emptied of their contents, after they have become foul, by dumping them into a hand car. The man attending them can manage two cars at the same time, one to carry

off the foul earth and one to bring fresh loam to take its place. This process can be repeated as often as is necessary, perhaps twice a week. This keeps the rabbitry in a sanitary condition and reduces labor to a minimum.

The partitions between the pens should be made of one-inch mesh wire for two feet above the floor, above that of two-inch mesh wire. Having allowed eight feet between the ground floor and the floor of the second story, we shall find it cheaper to put the wire in solid rather than to make panels. If panels are desired, the frames should be made of 1x3 Oregon pine.

A desirable feature of the rabbitry, where practicable, would be an open space in the second floor above the tier of cabinet hutches for ventilation, especially in hot weather. This arrangement would leave floor-space in the second story ten feet wide from the plates towards the center of the building on each side, and an open space twelve feet wide over the cabinet hutches.

To strengthen the wires and panels outside of the building, it is a good plan to run strands of heavy wire, such as is used for baling hay, four inches apart, from the ground up for about three feet high. Draw these tight and fasten them with heavy staples; the sort used for barbed wire is the best. Place these at intervals of about eight or ten feet. Dogs attacking the pens will invariably meet with defeat when these precautions are used. They grab at the wire which lacerates their jaws, starts them to bleeding and disconcerts them. All the pens should be covered overhead, with two-inch mesh wire netting to keep out cats which, if not prevented, will kill the young hares. The does do not pay much attention to the young after they are three or four weeks old and cannot be depended upon to drive away cats, even if they were able to overcome them.

The bottoms of the outside pens should

BILL FOR WIRE FOR MODEL RABBITRY.

SQUARE WIRE
FEET. MESH.

924	1-in.	2 ft. wide wire netting, for Panels of Outside Runs.	
1386	2- "	3 " " " " " " " " " " Outside Runs.	
560	1- "	2 " " " " " " " " " " Partitions of Inside Runs.	
840	2- "	3 " " " " " " " " " " Partitions of Inside Runs.	
84	1- "	1 " " " " " " " " " " Under doors enter'g Inside Runs from Alley	
700	1- "	2 1/2 " " " " " " " " " " Outside and Inside End Doors to Runs.	
1176	2- "	" " " " " " " " " " Carpeting entire surface of Outside Runs.	
1176	2- "	" " " " " " " " " " Covering tops of Panels to Outside Runs.	
504	2- "	6 " " " " " " " " " " Fences of Outside Alley.	
96	1- "	" " " " " " " " " " Gates to Outside Alley.	
96	1- "	" " " " " " " " " " Gates to double doors at ends of Inside Alley	

BILL FOR LUMBER FOR MODEL RABBITRY.

				FEET.
28 Pieces	3x3x16	for Outside Studding	- - -	336
28 "	3x3x20	" Inside Studding supporting purloin,	- - -	378
33 "	3x3x16	" End Studding,	- - -	396
15 "	2x3x12	" Gable Studding,	- - -	90
12 "	3x6x14	" Underpinning Sills,	- - -	252
24 "	2x3x14	" Plates,	- - -	168
6 "	2x6x32	" Middle Joists,	- - -	192
28 "	2x6x10	" Joists	- - -	280
T. & G. Flooring,	-	-	- - -	1050
5 Pieces	2x4x32	for Sealing Joists,	- - -	110
34 "	2x4x22	" Rafters,	- - -	516
10 "	1x6x22	} Collar Beam Braces and Bridging.	- - -	110
10 "	1x6x8		- - -	40
5 "	1x6x10		- - -	25
30 "	1x6x18		- - -	270
Sheeting,	1x4	-	- - -	1200
Shingles,	-	-	- - -	14M
Windows, Skylights,	2-8x32.			
" "	2-3x6.			
120 Pieces	1x3x14	} For Panels, Cross Pieces to Panels, Door Frames, Panels for Outside, Alley Fences,	- - -	360
45 "	1x3x12		- - -	135
70 "	1x3x24		- - -	254
9 "	1x3x12		- - -	90
3 Lap Rustic	-	-	- - -	2900
4 Fluted Corners.				
20 Windows.				
4 Sliding Doors with Frames.				
2 Inside Eastlake Doors with Frames.				

be covered with two-inch mesh wire netting. Take strips either four or six feet in width, and a two foot width lay them down upon the ground side by side. Place a strip of timber across each end and fasten the strips together with one long strand of wire, weaving it in and out, bringing the selvedge ends of the wire together, taking stitches at intervals of from six inches to a foot. Cover this flooring over with about an inch of dirt. The outer edge of the wire netting should be brought up to the stringer of the panel in end pens and fastened with staples leaving no opening through which the young hares can elope. They will slip out through one that is surprisingly small.

The pen of each breeding doe must be furnished with a nest-box. A good box for this use is an ordinary, thirty-pound cracker box. If the pen is floored the box will not need to have a bottom; otherwise it is better to leave the bottom of the box. Attach hinges to the cover so that this may readily be lifted in order that the litters may be examined. On the bottom of the box divide off a space about twelve by eighteen inches by a partition three inches high. This will confine the nest which the doe makes and will keep the young from falling out.

This rabbitry is intended for twenty breeding does and three bucks. This will permit the holding of the first litters until they are old enough to breed and also of separating the bucks at three months of age, giving each buck a separate apartment by using the cabinet hutches, allowing each buck to remain in one of these for a week or ten days, allowing exercise every two or three days, then giving him a few days outside and continuing a change about in rotation until the rabbits are sold.

The hutches and pens should all be supplied with automatic grain feeders and hay racks, in addition to the nest

boxes and the arrangements for watering already described. Then the rabbitry is fully equipped for the reception of its foundation stock. The hay rack which we use is made of heavy wire and is so constructed that the rabbit's head cannot be caught in the wires. In some forms of hay racks used, the hare is likely to hang himself or to get his ears torn. The automatic grain feeder is constructed as follows: It is a box having a diagonal slant on one side made of tin or iron. This goes down within an inch of the bottom, with a half-inch space between the back of the box and the slide at the bottom of the inside. The grain falls through this to the bottom of the box, and, as fast as the supply is eaten away, more will follow. This may be adjusted to supply more or less as desired. The feeder should be about sixteen inches long and ten inches high. The base should be four inches wide, all made of galvanized iron. The width at the top, between the slide and the back, should be about four inches. Have a hinged cover, or lid, across the top. Such a box will hold enough mixed bran and oats to last a doe and her litter from three to six days, according to the age of the young. We make it a rule to fill ours Mondays and Thursdays of each week, but look to the supply daily. If the stand-pipe and funnel-cup system of supplying water cannot be employed, a quart water fountain is the proper size. It should be set upon a shelf about a foot high. When a young litter begins to run about, the height of the drinking cup should be so arranged that they cannot get any water until five or six weeks old. Until that time they will get sufficient liquid from nursing. Like some "humans," if allowed to drink, they will drink too much. Cold water, or any cold liquid, disturbs their circulation, which, in turn, retards digestion, causing a fermentation of food. Colic, slobbers or some other intestinal derangement is the final result.

BREEDING AND REARING.

Having built a rabbitry we start in with a herd as a foundation in proportion with the limits of our purse and of the business that we hope to establish. For a small rabbitry four does and one buck will do very well. If desired the four does could be increased to twenty-five and the one buck would answer equally well as with the four, but most breeders prefer different strains of blood and a good proportion is one buck to six or eight does. In all cases the bucks should not be akin to the does. The does will take the buck at five months of age and it is well to breed them then before they become too fat. The best specimens are obtained from mating young does with bucks that are fully matured.

The bucks should be the best obtainable. He should be allowed a long pen, one twenty-four feet in length is about right, so that he may have plenty of room for exercise. Two bucks should not be placed in adjoining pens, because under such circumstances both will be constantly in a state of frenzy and will become weakened and perhaps impotent.

When breeding is intended place the doe in the same pen with the buck. Never take the buck to the pen with the doe. Never lift the doe by the ears. Harm is certain to follow this practice. Always get her into a corner of the pen with her head turned towards you. Place one hand under her haunches and lift her up permitting her head to rest upon the other arm or under the arm. If the head is hidden hares usually will not struggle. As soon as they become accustomed to this method of lifting them and learn that it will not hurt them they become very tractable. As an aid to the lifting the free hand may grasp a handful of fur and skin over the shoulders, but it is best not to lift them entirely by the skin because, if they struggle, the skin may be torn underneath resulting in clotted blood which may ruin the animal. Sometimes hares

that are not accustomed to being handled will strike with their hind feet with great force, often cutting the flesh of the person attempting to hold them, to the bone. When does are in season the service will be satisfactorily accomplish in two covers. Never permit more. The doe should be watched for about five minutes after she is placed in the with the buck and if she refuses she should be at once returned to her pen. A trial should be made every three days. Occasionally, although rarely, a doe will miss. Do not allow a doe and a buck to remain together all day. One or the other will be worried and thereby injured. The does will kindle in thirty days from the time of service. There are recorded, instances where they went over time one or two days. Occasionally a doe will be found which will drop only five or six young, but this is no disadvantage because these will usually make up in size and weight what they lack in numbers. But probably ninety per cent. of the does drop from eight to twelve at a litter. It is safe to count upon eight as an average. This is especially true when the does are allowed only six litters a year, which number has been found to be the most profitable, everything considered. It is a fact, however, that the doe will take service in one hour after having kindled and will kindle again in thirty days.

The young will begin to eat hay and grain at about two weeks of age, when they should have a tray at least a foot square with one-inch sides, and a constant supply of bran and oats. When five weeks old they will be large enough to get their grain from the doe's automatic grain feeder, when the tray should be removed. Occasionally a doe will be found that will drop from twelve to fifteen young every litter. In such cases it is necessary to have a nurse doe to assist in raising the litter. Never allow more than ten to be reared at most. Occasionally a barren doe is

found; but not more than one in a hundred, either of does or bucks, is likely to prove barren. Before rejecting an apparently barren doe, try her to different bucks, and allow three services each heat. Test her from three to five days in succession. Follow this course for a couple of months, and if she still fails to breed, make meat of her at once. Do not sell her to some amateur to start a herd with, or to some inexperienced and unsuspecting person. Keep a careful record of your stock, and so avoid losses of this sort.

Good care of the buck, and unusually dainty dishes are well repaid for in the number and vigor of his offspring. The buck is really one-half of the herd. He should be handled little, except upon the ground. He makes vigorous objections to having his ears pulled, and often does himself injury in his struggles to free himself from the hands of a captor. When he must be handled, keep him off from the ground the shortest possible time; but he will submit to petting as readily as a doe, if he is not pulled about or squeezed or bunched in the arms. Place him in your lap or upon a small table, and he will permit himself to be stroked. The does are also tractable in this respect. Never strike a hare, even if he scratches your hands with his hind feet when being handled.

About a week before the time for a doe to bring forth a litter, see that she is plentifully supplied with dry straw or hay. With this she will build a nest for the expected brood. This she will line with her hair plucked from her own breast, making a soft and warm receptacle for the tender nurslings. Do not attempt to make the nest for the doe. She would not be satisfied with your workmanship, but wants a nest of a peculiar inverted-cone shape in which she covers up the young every morning for the day. When born, the young are hairless and their eyes are closed. They open their eyes in about a week. At about

the twentieth day they will leave the nest and eat little pieces of bran that may be placed on a tray near the box. They will soon nibble choice morsels of hay.

We are not in favor of the common practice of testing does after they have been bred as we have known many instances where serious harm has resulted. In some cases that we know of, does took the buck a second time after being served and littered two different lots of young at two different times. In each instance either the doe or the litter, or both, died. The chances are all in favor that the doe is satisfactorily bred if she submits to the buck at all, a point that can be very easily determined by observation. The hare is such a fertile animal that there is very little probability that a doe will miss. If, however, fifteen days have elapsed from the date of service and the owner is very doubtful upon this point the doe may be tested by placing her again in the pen of the buck. If she avoids him, runs about the pen and, especially, if she utters plaintive little cries, or whinnys, you may be certain that she is bred. You should remove her at once and should not repeat the testing process. For ourselves, we would rather run the risk of a doe going over a month or two without a litter than the risk of serious injury to her from testing.

As already stated we prefer to breed does when about five months of age to prevent their becoming too fat, as is often the case when they are held from the buck until they are six or seven months old. When too fat they are likely to suffer from fever at the time of kindling, to have caked udders, to take cold and often to die.

Young bucks may be permitted a doe once in five or six days for two months, after the buck is five months of age. But it is better to keep him from breeding until he is seven months old as he will develop faster and will be in every way a more hardy and vigorous animal.

After the first two months of breeding allow him two does a week for another month, then three a week for a month or two. Then give him a complete rest for a month or two. These rules apply especially to high-class stock. If you have a cheap buck you need not be quite so particular about him.

The young bucks must be carefully watched as they develop, especially if several are kept in a pen together. Often one or two bucks in a herd of fifteen or twenty will develop faster than the others and will castrate nearly all the rest of the lot. Sometimes this operation will be performed so neatly that the victim does not suffer much inconvenience and may be permitted to grow until he is worth something for meat. At other times the operation, so summarily performed, is not very successful and the victim dies. The only certain way of preventing these unfortunate occurrences is to separate the bucks at ten, or at most, twelve weeks of age, giving each a separate pen.

A high-type buck can get as many as a thousand of his progeny within a period of a year. Say that you commence to use him at his fifth or sixth month and breed him twice a week, allowing the average of ten to the resulting litters. The buck may be given a few extra breedings to make up for losses and disappointments. Allow him three years for service and call his get that survive two thousand. One half of these will be does. These does will produce an average of fifty per year, each, after arriving at maturity. Thus the thousand does will produce fifty thousand young the second year. Certainly this is a cause for alarm to the calamity howlers of our country and the best possible argument for expansion.

Never breed a buck intended for exhibition purposes until after he has made his record upon the exhibition tables. Breeding almost invariably thickens the jaw, dims the lustre of the coat and detracts from the rating of the buck

anywhere from half a point to three points.

MANAGEMENT AND CARE IN GENERAL.

Hares should have at all times an abundance of food, water and air and an opportunity for exercise. We have devised a permanent hay rack and a permanent self-feeding grain box, which work like a charm. The fresh water should be renewed twice a day, in the summer. In the winter fresh water once a day is sufficient, but the supply should be constantly accessible. The idea formerly advanced by rabbit fanciers that water should be given sparingly, if at all, is utterly absurd, as well as cruel and inhumane. If green alfalfa, or grass, or other succulent food, such as carrots, is fed daily, hares will require little water, but nevertheless water should always be kept before them after they are four months of age.

The hare can endure cold much better than extreme heat, but, if shade is provided, the warmest summer days will not be sufficiently hot for injury. The only conditions necessary to secure, and these are very easily obtained, are shade for summer and protection from storms. We have lost a few hares from the excessive heat of extremely hot days, but such loss was always owing to our neglect to provide sufficient water and shade, following the rules of alleged authorities, or when in the hurry of moving, or something of that sort. These that we speak of were full-grown animals, and were over-fat. We had not then fully realized the bad effects of a very hot sun. The hare must have access to a perfectly dry place for protection from storms. He should have a space protected by a roof at least eight feet wide, built lengthwise of the pens. This roof should be up from the ground, giving plenty of space overhead for ventilation.

Hares relish hot water and will sip it at a temperature about as hot as

can be borne on the hand when the water is turned into the vessel from which the hare is to drink. This hot water should be offered to the doe after kindling and her youngsters when the litter is about two weeks of age. This is the time when the youngsters commence to eat bran and straw or hay. Since the doe nurses her young only in the night, they need some liquid with their breakfast of bran or hay, which they usually receive about six or seven o'clock in the morning, also at noon and towards night, when they are given their last meal.

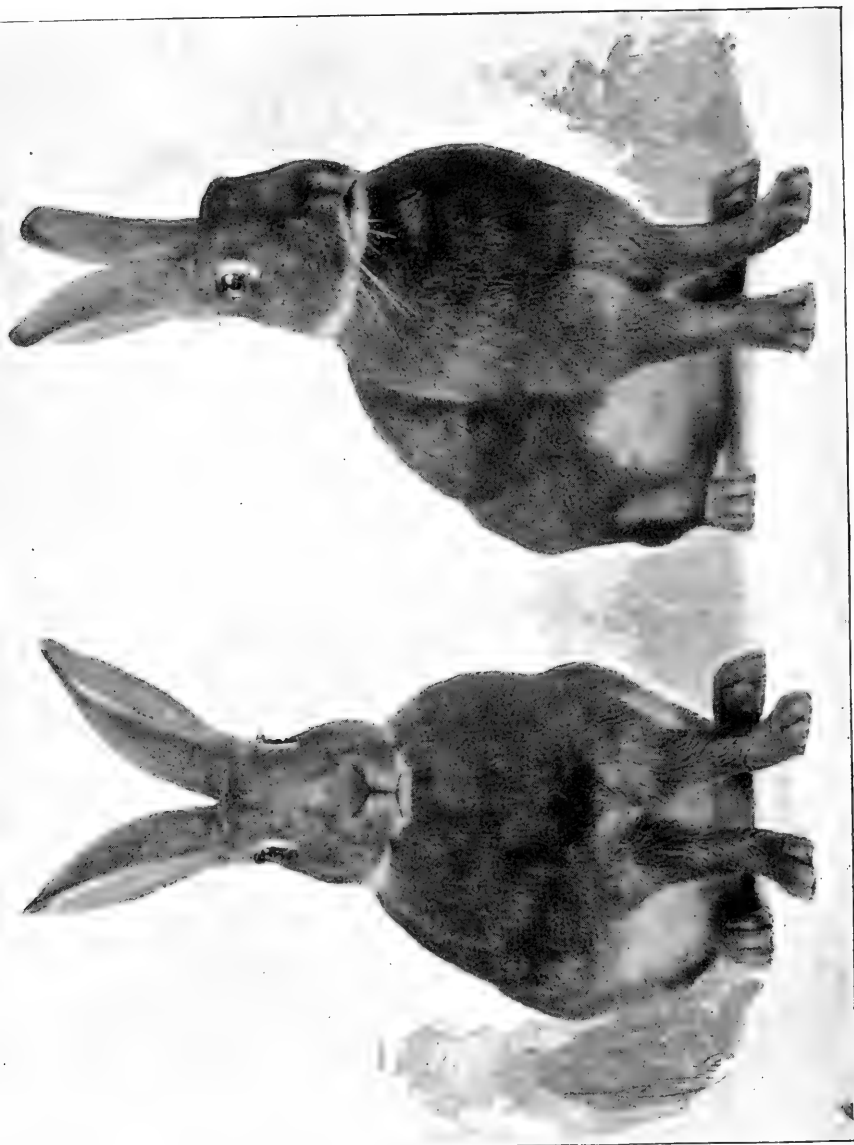
Better than the hot water is hot milk or a gruel prepared by turning boiling water upon bran or by boiling bran and rolled oats in water for from five to ten minutes, then straining, leaving only the liquid gruel which should be about the consistency of a heavy soup, so that the hares can lap it. When preparing milk do not permit it to boil but give it hot without boiling.

Hares should always be protected from draughts when confined in quarters too narrow for exercise. Strong currents of air bring colds. Young hares, three months and younger, crowd together in confinement, apparently desiring to screen themselves from the light. In this way, those in the middle of the pile become overheated. Their systems are weakened and they are rendered liable to take cold readily. The wild rabbit is often seen sitting on a rock or log on a still, cold day, but when the wind blows you will always find him either by the side of a log to shelter himself from the wind, or in a brush pile. But you will always find him with his head out to secure the fresh air. His heart beats with the astonishing rapidity of one hundred and eighty beats per minute, and his respiration is more than twice as rapid as it is in man.

The twigs of the black willow tree, found in some localities, is an article of diet greatly relished by either wild or tame rabbits. They should be fur-

nished occasionally, when procurable, not as an article of food or medicine, but on the general principle that, these being something eaten by the hare in his wild state, they are adapted to him and tend to keep him in health. The nearer we can bring all the conditions surrounding the hare to a state of nature, the better we shall succeed with him. The willow twigs may be gathered, tied into bundles and dried. In the dry state they will furnish those vegetable elements necessary to counteract the ill conditions to which hares are liable when deprived of the roots, barks, berries and shrubs that they would obtain in a wild state.

Burnt willow charcoal, or, in the absence of that, any kind of charcoal, pulverized, and mixed with the grain once or twice a week should be fed, especially where grain is fed largely, as with a doe and the buck that are being bred frequently. Roots and the tops of the wild dandelion, docks, mints, and many wild shrubs and herbs are beneficial to the hare. One may experiment in these directions, commencing gradually and proceeding with caution and should endeavor to determine the varieties of wild growth common in his locality that will assist in promoting health and longevity in these pets of ours. Unquestionably, the hare in his wild state eats of these various growths at certain seasons of the year, and finds in them an antidote to certain diseases that sometimes become epidemic. During March and April in the East, and during other months in different portions of the country, there is a transition between winter and summer weather. It is during this transition, and similar changes at other portions of the year, that there is most sickness both among men and animals. Nature teaches the hare to partake of certain food elements at these periods which assist him in avoiding and in recovering from these attacks. Instinct is the best teacher and, as we, of course, lack that instinct, we cannot



PRIMROSE AND SWEETNESS. Property of Bonanza Rabbitry.

Litter sisters at 9 months. Sired by imported Lord Britain; dam, Bonanza Beauty. Scores 94½ and 94½; weight 10 lbs. each. Bred at Bonanza Rabbitry and reserved as breeders. A little sister of these does, Lady Vic, won the American Championship Prize, \$50, at the great Los Angeles Exposition, Mart and Feast, Feb. 1900. Lady Vic weighs 11 lbs. Another litter sister, Britain Maid, weighs 11½ lbs., and while nursing a litter, scored 94 and was sold for \$340.00.

provide for the hare in this respect, just as he would provide for himself. But we ought to make an intelligent study of the subject and to assist him as much as possible.

CARE AND MANAGEMENT OF THE DOE.

We are not likely to give too much attention to the care and management of the doe, especially during her breeding periods. Prolific as she is she will deteriorate and suffer unless she has the very best of care. We should constantly bear in mind that her way of life, in captivity, is necessarily artificial as compared with the wild state. For this reason she needs constant attention and intelligent management. The best results can be secured only by experience and attentive observation.

If the doe must be kept in small quarters she should be allowed an approach to mother earth during the period of gestation and an opportunity to burrow in the ground. It is well enough to let her dig a hole and make a nest, being kept in the burrowing pen until a week or even five days before her time of kindling. Then place her in a pen next by, supplied with nest box and straw and she will prepare a new nest in which she will kindle. This digging and burrowing is the best possible treatment to bring her into condition for kindling. She will become strong, will have a healthy appetite, will deliver better, will be much less liable to contract a cold at the time of delivery and will milk much more freely than she could milk without this preparatory conditioning. As a result the young will be much harder and more active. A good plan is to fit up one pen with a pile of loam say five or six bushels, and to turn a doe into this pen for two or three weeks before littering time and let her dig and work.

Great care must be taken to prevent the doe from contracting cold the day she kindles. Do not allow her to have

cold water for two days at this time. Give hot water instead. Do not feed any grain for four days after littering and no succulent foods except a small amount of carrots. Examine the nest within a dew hours after the doe has littered. Some authorities forbid this, but the modern, high-type hare is not as touchy as the old-time types used to be. They have been petted and handled until a willingness for petting and handling has been bred into them. It is rare that a hare of either sex will make violent efforts to free itself when taken in hand if it is not handled roughly.

I like to remove all but five or six of each litter to nurse does. They will then get abundance of milk and will grow strong and vigorous. In order to make sure of capacity in nurse does I breed two nurse does for each thoroughbred Belgian doe. One may fail. If both kindle, so much the better. With a litter of twelve, I then divide them evenly, giving four to each nurse doe and leaving four with the mother. This plan results in grand youngsters.

I prefer a high-grade nurse doe, if possible a half-bred Belgian or any cheap Belgian, to any common rabbit. A pure-bred Belgian is much better than a mongrel. Angoras are usually very productive of fleas, while the shroter-haired Belgian is troubled but very little, if any. There is no variety of rabbit equal to the Belgian as a mother or breeder. Do not rush a brood doe the year round. Better always allow a rest from breeding during the months of July, August and September. or for sixty days at this period, at least. Bucks should also have their dormant season during summer.

Handle the does and bucks by hand. The transfer-box is unnecessary with high-type hares. Do not feed barley, corn or wheat to milking does. These grains are too fattening to be used at that period. In general and always oats and lightweight bran are the best grain foods. It is best, after a doe has had

one litter, to feed her no grain until she is about half gone with another litter. Then she may have bran and a little oats regularly until she kindles. Then withhold the grain for three days. Then commence to feed her bran and hay, gradually adding oats until, ten or twelve days after littering, she should have all the grain she needs before her at all times during the period of nursing.

Imported does are very frequently barren. In fact, we doubt whether any importer has received satisfactory returns from imported does and we know of numbers, including ourselves, who have been greatly disappointed in this regard. There is something in the changes of climate and modes of life that tends to produce this condition. But we very rarely find a barren doe among American-bred stock. On the other hand, we have come to look upon litters of 12, 14, 16, and even 18 and 20 as common occurrences at the Bonanza Rabbitry.

Wean the does gradually by taking away part of the youngsters at a time. Removing all at once is likely to cause a fever because the milk is still secreted and there is no natural outlet for it. This practice may cause the death of the doe, through a poisoning resulting from congestion of the milk ducts. Frequently this results in paralysis and the doe drops dead. This is especially true with lean, lanky does that are good milkers. When the last of the litter are taken away return enough of them to the pen of the doe to nurse her out once or twice after being away from her for twenty-four hours. The young will readily nurse and the doe is eager to be relieved in this way from the surplus of milk. By this plan she is dried gradually and does not suffer injury from weaning. Feed no succulent food to the doe while weaning the young. If you have a valuable litter it is just as well to leave them with the doe until they are ten or twelve weeks old. They may not

derive much nourishment towards the end of this period from the mother, but they will receive some and this is not only the best food for them but seems also to act as a preventive of disease and assists them in getting over the critical period of youth. After ten or twelve weeks, depending somewhat upon the degree of forwardness of the young, the doe will no longer permit them to suckle but will fight them away and resist any efforts in that direction. It is then best to remove them at once and, usually, no precaution is necessary as regards the mother in these cases. She is probably pretty well dried by that time and will receive no harm from a cessation of nursing.

Not only should the succulent foods be removed from a weaning doe but all grasses, vegetables and heavy grains as well. Give her just a trifle of bran for two or three days and dry hay or straw. Give her plenty of room for exercise and let her run about. Give her a pile of fresh loam in which she may burrow and cool her fevered breast. She should not be bred until three or four days after the milk is dry. Then gradually reinstate her succulent food. When the last of the litter are removed let her go back to nurse them twice the first day, say night and morning, and once the next day. After a doe has nursed eight or ten weeks her milk becomes very rich and the doe becomes thin. When the demand for the milk ceases the system takes it up and it becomes the fat or flesh that gives the doe the plumpness which we call good condition.

Some does wean their young at five or six weeks and fight them away preventing them from nursing longer. These rarely have any difficulty with the weaning process. It is good mothers that are liable to be injured. Sometimes the milk glands are enlarged or suppurations or swellings take place. A doe that is resting after having weaned a

litter and having been bred for another, should be fed moderately but in great variety, even to the twigs and boughs from fruit trees.

CARE AND MANAGEMENT OF THE YOUNG.

For the first few months of their career the young do not require such constant and watchful attention as the breeding does because their mission in life is then simply to eat and grow and develop. Nevertheless they must be looked after with a sufficient degree of care. Their responsibilities will increase as they grow older and they must be fitted and prepared for these. The hare is a very warm blooded animal. The young are born naked, and the mother covers them as soon as born with fur plucked from her own breast. She then goes out about her pen and leaves them to themselves until night when she goes to them at intervals and nurses them. Except during the comparatively brief periods of suckling they are left constantly to themselves day and night. Yet one rarely suffers or dies from the cold, no matter how severe that may be. The hair-lined and hair-covered nest which the mother makes for the young is perfectly adapted to the climate in which they may happen to be born and the instinct of the mother, in this regard, is perfectly accurate and reliable. The mother will uncover them when they require more fresh air and her instinct may always be trusted in this respect. In the middle of a hot day the doe will open the covered nest and toward night recover it. Therefore, for the first three weeks, or until they leave the nest and commence life, to some extent for themselves, by beginning to take other nourishment than that provided for them by the mother, she may be trusted to look out for them. All that is necessary is to provide both doe and young with quarters reasonably adapted to the climate in which the young are to be reared.

In cold climates they will require warmer quarters than they need on the Pacific Coast, for example. In extremely cold climates, especially during the most severe weather, they should have access to a mow of hay or, at least to a bale of hay or straw. The mother will burrow into this and make a warm, snug, nest for herself and her progeny. With proper attention to these details, the amount of protection afforded being varied to suit the degrees of cold to be endured in different climates at different seasons of the year, the hare will thrive in any climate and will do equally well in Southern California or in Alaska.

Other animals, the cat for example, lies with her young to keep them warm, but the female hare never remains with her young longer than the time required to nurse them. She will permit them to suckle many times during the night, but rarely, if ever, in the daytime. The hare is a night-prowling animal. He mopes about, usually crouching in a corner of his hutch, during the daytime, but during the twilight, both of morning and evening, hares are very frolicsome and they roam a good deal during the night, especially on moonlight nights. The morning or the evening is the suitable time for mating bucks and does. They should never be disturbed during the middle of the day more than is absolutely necessary, and on hot days they should be disturbed even less than in cold weather.

The food of the young for the first ten weeks of their existence should be light-weight bran, hay and a thin shaving of carrot or other succulent vegetable to each little hare. They should have three fresh supplies of hot water daily until they are ten weeks or three months old, the dish being removed from the pen after they have been permitted to drink.

Never allow more than from eight to fifteen young to run together in one pen after they are weaned. And eight is much better than fifteen. They have a

habit of piling up together and those in the middle of the pile become heated and moist with perspiration or with the breath of the hares. When the pile breaks and they scatter about the pen, those very warm are liable to contract severe colds. Always furnish both old and young, in some portion of the pens, a floor so that they may enjoy occasional rests from lying on the ground. A portion of every pen should be thoroughly protected from sun heat, and here hammocks should be placed made of wire screen, half-inch mesh, and strung about two feet from the floor. These make very comfortable resting places for the hares in hot weather. The little bunnies soon learn that lying on the screen affords more air about their bodies than they secure on the ground, and they soon learn to lie in the hammocks. They will spend much of their time there during the summer season. They will learn to jump into the hammock from a box which may be placed in a convenient position with this point in view. The hammock may reach from side to side of the pen and a width of of two or three feet is not too wide. It should be fitted with hooks at each end so that it may be dropped at either end or removed altogether when you want to pass through the pen. The young will prefer this to a cellar-box during the hot season.

GENERAL SUGGESTIONS.

In selecting foundation stock for a rabbitry, the most vital point is to select males and females that are not akin to each other. Inbreeding has been proven to have been the ruination of thousands upon thousands of every class of domesticated stock. This has discouraged a great many, and the same course will continue to discourage all who may follow it; for it will always result in speedy failure. The same course would result in failure in the management of cows or any other stock.

When the leverets are removed from

the doe, the litter is put into an apartment by itself, or several litters may be put together and allowed to remain up to ten weeks of age, provided they have plenty of room. If restricted in room for exercise, the soothing syrups, cough remedies, and Ripan's tabules, so gravely described by some authorities upon the hare, will be called for to counteract some of the numerous diseases, which are as unnecessary under a proper system of management, as they are disagreeable for owner and fatal to the hares, if allowed to develop. When well cared for, and bred out instead of in, and given plenty of room, each succeeding generation will be an improvement upon that preceding it. No stock that is not fully up to a high standard of excellence and qualification should be sold for breeding purposes, even if the buyers are willing to take their chances.

We have never found any diseased conditions in our hares when well cared for, as they have been ever since experience taught us to disregard the foolish rules laid down by self-styled "authorities," and to depend upon common sense and our knowledge of what is natural for the hare. In some specimens that were too closely confined, we found a mottled appearance of the lungs, indicating that the rabbit had a lack of air and exercise. When they have plenty of exercise they never develop this appearance. If anything is wrong with the hare he dies very quickly, usually in from one to two days after the difficulty is first noticed.

Cover your rabbitry or arbors in fields with hop vines when hares are reared that way. These will grow rapidly, will make a good appearance, and will give your rabbits plenty of shade in the summer. In winter, when the rabbits need a little sun, the leaves are gone. A few hops will often come handy in the house; or you can sell them to druggists and grocers or brewers. The eastern varieties of grapes would answer equally well as they can be grown upon trel-

lises. The Concord, Isabella and Delaware are good varieties.

If one desires to raise hares solely for meat and with little reference to choice breeding, an acre of ground could be fenced in by sinking a wire netting, two-inch mesh, a foot and a half deep into the ground, with a three-foot strip of one-inch mesh above ground, then a four-foot strip of two-inch mesh above that, making a fence seven feet high. The strip below the ground would prevent the hares from burrowing out of the inclosure and dogs from digging in, and the fence would be high enough to keep out the biggest and liveliest dog. From twenty-five to fifty does and one buck could be turned loose in this inclosure. Hay racks, made on the same principle as already described, but portable, should be put up. Feed the hares once a day to hay and grain carried to them in a cart or wheel-barrow. With twenty-five does a draft of two hundred could be made monthly any time after six months, for the market. These would dress from five to six pounds each, and would be worth 20 cents per pound. Under these conditions probably twenty-three out of the twenty-five does would produce a litter every month in the year, with perhaps a rest of one month. This would give an income of \$200 per month from an acre of land after a waiting period of only six months. Cut this income in two and it far exceeds the returns secured by the Chinese market gardeners who are the recognized masters of the art of intense culture in this country. Such a rabbitry would need no elaborate pens or improvements. It would be necessary to provide only a few piles of boulders or some logs and brushes under and about which the does could construct their warrens, and trellises for grapes for shade. The trellises may be roofed to shed rain.

KEEP THE PENS CLEAN.

The pens should be thoroughly cleaned once a week. All the droppings should be swept out, and all the old straw and hay should be taken away. The nests should also be removed every time a litter is taken from the doe. The key-notes of success in this fascinating industry are method, care, common sense in selection and breeding, and the very highest standard of honorable dealing with all patrons. Remember that a buyer well satisfied is the best possible advertisement that you can have. He will inevitably send you other customers. Sometimes hares when sold are shipped in a sack. This practice is inhumane and injudicious, and cannot be too strongly condemned. It is cruel to the animal, and it is not good business. The lungs of the hare become very quickly effected when deprived of an abundance of fresh air. No apparent damage may be done, but at the same time, the hare may droop and develop unexpected weakness. Then the buyer will be dissatisfied. An open-sided crate is the only satisfactory arrangement for transporting a hare, even for a short distance of a mile or two. For longer journeys the crate should be equipped with automatic feed box and automatic drinking fountain, permanently fastened and an abundance of feed and water supplied.

It is a mistake for American breeders to assume that only in England are choice specimens bred. We now have the strains in this country to breed as fine types as can be bred anywhere, and our climate, food, facilities and methods of management are superior to those of our British cousins. Moreover, American-bred stock is much more hardy than imported stock. Not more than forty per cent. of the latter lives to be of any real, permanent value to the importers. In fact, if an importer secures a moderate number of breedings from an imported buck he, as a rule, has reason to con-



CHERUB at 8 months of age. Bred at Bonanza Rabbitry.

Weight 9 lbs., score 94 $\frac{1}{4}$. Winner of first prize in his class and headed many groups on which we won nine special prizes at the Los Angeles Exposition, February, 1900. Reserved for our stud Sire, Lord Britain; dam, Avalanche who won first and special prize and gold medal at Chicago, 1898.

gratulate himself and must be content with having introduced a new perhaps valuable strain into his rabbitry. Imported hares rarely become fully acclimated, but the native-born are hardier. We have shipped hares to the far eastern parts of the United States in the dead of winter, and have yet to receive the first complaint of sickness resulting from the journey. On the contrary, we have numerous letters on file testifying to the pleasure of buyers at receiving the hares purchased by them in the pink of condition.

THE QUESTION OF FOOD.

Hares like variety, and will eat almost any kind of grain or green food, vegetables and fruit; also, alfalfa or other kinds of hay. They will eat bread and other supplies from the table, except meat. Never give the young any green feed. It is a safe rule to give them nothing except well-cured hay, grain and oats until after they are four months old. The older hares may be fed fresh-cut alfalfa, that which is in bloom when cut is best. When this or any other vegetable has attained sufficient age to possess some sugar and vegetable fat, hares will do well upon it fed green; but half-matured green stuff fed green especially when wet, is likely to cause bloat and death in a hare the same as in cattle and sheep. All green stuff should be fed at mid-day, after it has been wilted by the sun. No wet vegetables or green stuff of any kind should ever be fed hares, whether old or young. It will surely cause colic and sickness and may cause death. Even the cured alfalfa leaves, if fed in too large quantities at a time, are sure to make trouble. The hares eat too much of such palatable food and then drink too much. This overloading of their stomachs often kills them.

In excessively hot weather over-fat hares will die. After two years of their lives, when confined, they should be

stinted to grain food and allowed only a little once a day when not nursing. It is surprising how little will keep a breeding doe or buck if it has been well cared for up to this age. If unusual growth is desired there is nothing better to force it than warm milk, given a little at a time, and many times a day to the doe when nursing, and to the young when they begin to eat, and from that time until they are nine months old. They will then attain their full growth, and will be larger and heavier at that age than they would have been when a year old if fed in the ordinary way. A few generations reared in this way would give us families of greatly increased size and weight. It might be possible to double the weight in the course of five or six years. Of course the best and most matured does would need be selected for breeding on this plan. A doe will consume about two cupfuls of fresh, hot milk, daily, while nursing; but she will consume a much less quantity of other foods. The extra weight attained will many times more than pay the extra cost of the food.

As a staple of diet well cured alfalfa is good enough feed for hares, and they will thrive upon it, in connection with mixed bran and oats. It should be well cured previous to being fed. It should be fed in such a way that the hares will get the stems mixed with the leaves. If fed the leafy portions alone they will overeat. The coarser straws, which they refuse to eat, should be removed every day and fed to cows or horses. There is no need of any waste. All of the trimmings of vegetables from the table, all scraps—except meat or grease—will be eaten by the doe and her litter. Anything that a sheep or cow will eat is number one feed for a hare, including such solid fruits as apples and pears, green corn, beans, carrots, parsnips, stalks of green corn, husks, pea pods and vines are unequaled, etc. All these are excellent food and will be relished.

To force growth, the cereals as prepared for the table, such as oats and wheat, cooked in milk and water, making a mush, will be taken by the young with avidity, and they will develop upon these with great rapidity.

Avoid raw potatoes and potato parings. They are injurious. Whenever you change to a new kind of food accustom the hare to it gradually, giving a little at a time, at first. Winter-grown alfalfa, or alfalfa that has been forced upon heavy, excessively wet lands, is cold and full of weak juices and should be used with caution.

These directions for feeding apply particularly to the Pacific Coast, where the alfalfa is the staple fodder. In other sections other grasses, such as clover or timothy, may profitably be substituted.

Coarse, bright straw should be kept before the hares at all times. Good oat hay may also be given. If alfalfa alone is fed, the hares will eat too much and will become pot-bellied, ruining the long, racy form which they should have. Hares are by nature browsing animals and prefer foods containing much fiber. They will eat the wood of their pens if not supplied with wood in some form. The twigs of apple, peach, apricot and plum trees are relished and it is a good plan to furnish this kind of food every few days. Twigs about the size of a lead pencil are about right. Ailing animals should always have food of this kind.

Don't stimulate hares with condiments or patented food stuffs. Their lives will be shortened by such practice. Much of the imported stock is stock that has been fed highly seasoned foods, under the idea that this gives them spirit and sleekness of coat. The loss in this class of stock is enormous. Probably ten per cent. die on the trip across the ocean and another thirty per cent. within three or four months after landing. Our climate is vastly different from the cold

and foggy climate of England, where it rains about half the time and fogs prevail the other half. The imported stock falls short in weight from three to five pounds as compared with American-bred hares, and the number of young to the litter is from fifty to ninety per cent. in our favor.

In connection with feeding shrubs we warn the reader never to give hares or any other animal the leaves, flowers, bark or wood of the oleander tree. This is a poisonous tree and has caused the death of both man and beast. But the twigs of other trees are very much relished, and, if fed twice a week, will be found to be preventives of many of the ailments found among hares.

PRINCIPAL DISEASES OF THE HARE.

The two diseases among hares that are most troublesome are undoubtedly snuffles and slobbers. There are other ailments, some of minor importance and easily relieved by simple agencies, others of greater severity and in which there is, usually, not much use of doctoring the hare. The quicker he is killed and put out of misery the better. But these are of rare occurrence.

Snuffles will attack hares anywhere if too closely confined. It arises from an irritation of the delicate mucous membranes of the nose and air passages caused by the fumes of the ammonia in the droppings and urine of the hare, as well as from a cold. It does not come from a cold alone as some people erroneously believe.

The best way to cure snuffles is to prevent it. This can be done by a constant use of antiseptics. The best of all is fresh air, which is also cheapest of all, and should constantly be supplied in great abundance. Dry loam, not sand, should also be plentifully supplied to the floors of all pens and should be renewed frequently, that which has become saturated and foul being carted

away to the manure pile. If these remedial agencies are constantly used there will rarely be snuffles, but a third excellent antiseptic is Formalin, a preparation made in England and imported into this country. It comes in a highly concentrated liquid, which may be purchased at drug-stores. Twenty-five cents worth will last a long time. A weak solution is made by adding one teaspoonful of Formalin to a quart of plain water. A stronger and better solution for more severe cases is obtained by using two teaspoonfuls of Formalin to a quart of water. This should be sprayed through the pens by use of an atomizer, such as is used for spraying the nose and throat in sickness, or, better because quicker, by using a syringe with a nozzle that will give a spray. In the solutions mentioned this preparation is non-poisonous and its use every day or two will keep the pens free from all odors and will thoroughly disinfect them, killing the microbes that cause snuffles and other diseases.

Slobbers is a disagreeable complaint most often seen in young rabbits but sometimes in old ones. There is a running discharge of watery fluid from the sides of the mouth and the hare weakens and wastes away. One authority recommends the following remedy: Equal parts of oil of juniper and sweet spirits of nitre. Five drops of the mixture in a teaspoonful of milk or water twice a day. Another remedy recommended is a little common borax given in water or a piece the size of a pea placed in the mouth. Washing the mouth with borax and water is said to do good in this disease.

The fact that the hare sometimes takes disease does not prove that he is a particularly delicate animal. Any animal, even man, would become diseased if exposed to the conditions that some hares are compelled to endure by their short-sighted owners. If you wish

to make your rabbitry a success go at it in the right way and remember that care and cleanliness, with abundant, varied and pure food, are the requisites of success and profit.

Do not expect to keep a whole herd of rabbits healthy if confined in narrow, close quarters.

GENERAL PREVENTATIVE MEASURE.

A circular runway is a splendid thing for giving hares exercise. These should be provided with hurdles, say four to each circular runway. These hurdles should be graduated from eight inches up, increasing by four inches and should be adapted to the ages of the hares. At six months of age the hare will scale a hurdle four feet high. Jumping over these will not only give them healthful exercise but will strengthen all their muscles and will make them long and racy. They will turn themselves in the air and will shake their heads in intense enjoyment. It is a pleasure to watch them enjoying themselves, making a treat for the owner or breeder as well as for the hares. A run of ten or twenty minutes, or half an hour is fun for them. Hares will always run in a circle whether in frolic or in fear. Make this runway a foot and a half or two feet in width and give the hares ground floor to run upon. There can be three concentric rings, one within the other. Make them of one-inch mesh wire. If made of two-inch mesh the hares are likely to catch their feet and some of them will be injured.

Have some convenient way to reach the hares, when you want to take them out, by opening gates. This plan is especially good for the breeder who is fitting specimens for prize-winning. In such a runway a hare will travel many miles in the course of half a day. This runway should be protected from the sun by some material. A runway twenty

feet in diameter gives a course of sixty feet. Three hares, placed in these circles, side by side, will invariably travel and in the same direction.

Variety of food, and pet dishes, will go a long way as a preventive of diseases. Make mashies with a little oil cake in them. Take one pint of oil meal and mix it with four gallons of bran. Add half a cupful of salt. Then to this add one-fourth of a cup of ground ginger, a good article. Add a cup or a cup and a half of pulverized charcoal, ground down to about half the size of kernels of rice. The best is that made from the bark of the black willow, but other charcoal will do, if this cannot be obtained, and should be kept in every rabbitry. Put this mixture in a kettle of boiling water. Have sufficient water to allow it all to swell freely. Give it from five to ten minutes of free boiling, then ten to twenty minutes of maceration. An hour even would do no harm. When done it should be nearly stiff enough to hold a ladle erect, not sloppy but a heavy mush. This quantity will give two feeds for a large rabbitry, being fed as prepared the first day and reheated the second day. Feed this preparation two days in succession each hare having a good tablespoonful for breakfast or supper. Give no other grain food at the same meal. Cocconut meal is an excellent substitute for the oil cake; yellow corn meal is another, but do not use two of these three at the same time. A doe that milks freely and is thinning down rapidly needs a treat like this often, and, in some instances, should have one feed of this a day, as much as she will take. Feed this mush as hot as the hares will bear, but taking care not to burn them, otherwise they will probably never touch the dish again.

Carrots, beets and rutabages are excellent succulent vegetables except when they have lain in the ground all winter. In that case they should not be fed, there is too much pith in them. When the

roots attempt to put out new tops or to set up a new growth there is little or no nutriment, and the fiber is injurious. It disturbs the digestive tract and produces paralysis, lameness and other ailments as results of this disturbance of the digestion. Flowers of common yellow sulphur are a good thing to mix in with the mash in cases where there is a lack of bowel action. It is a good practice to give this once or twice a week all around the herd, adding two tablespoonsful, or about one-third of a cupful to the quantity of grain above described.

The above quantities are for hares that are past three months of age. Nursing hares should have little or not cold succulent vegetables. Cabbage is especially injurious to the little ones in Southern California, but probably would have no injurious effect in northern or higher latitudes. We must choose our foods sometimes according to locality, for it is certainly true that what is safe or even beneficial in some climates is injurious in others. Hares will stick to alfalfa for a few years but will not be long-lived on this diet. In time they become heavy and sluggish and then there is a prospect of trouble.

Another nice treat is the twigs of trees which may be given on those days when no mash is given. As a forcing system when rapid growth is desired add to the formula for the mush a gallon of sweet milk. Now we have an ideal food for this purpose. The milk may be added after the porridge is well mixed, has commenced to boil and swell and needs thinning. This is a splendid ration for helping out nursing does.

The most serious difficulty in the rearing of rabbits is their taking colds, or the breaking down of the circulatory powers, which is the prime cause of colds. The vital powers of the hare have probably commenced to wane perhaps a month before he takes cold. As long as he is on the thrifty, growthy

side he is all right. Hence the necessity of the treatments above referred to. The ultimate cause of disease is a lack of condition. Snuffles is an uncured cold which has run into a chronic condition, and may be called catarrh. It is not a disease to be feared as long as the hare blows his nose and cleans out his head. He never does this when his lungs are weak. If the hare lives to warm weather and, if nature, has a rest from breeding, and his constitutional vigor is kept up by the little treats in the way of diet already described, he will almost invariably recover, except in the cases of very young hares. But if a hare is on the downward side, the cold will quickly work its way into the throat, causing a rattling there, and will finally involve the lungs unless the circulation can be aroused to throw it off. The finest treatment in such cases is unquestionably heat, paps and tonics. But be sure that your hare has not got into an inflammatory state, which will be shown by rapid breathing and excessive thirst. In those cases never give any condiment such as ginger, pepper, cloves or liquors. These inflammatory cases call for specific remedial agencies which should be kept in stock. In any other stage probably three out of four can be cured and placed on the safe side in thirty hours, often in from twelve to fifteen hours.

The hare is an animal in which changes, for better or worse, take place very rapidly. If he is not on the highway to recovery in from twenty to thirty hours he is certain to go the other way. In these cases of rapid failure of the vital power heat is the essential thing to be applied, a uniform temperature and a high temperature. Put the sick hare into comfortable quarters and give him room enough for some exercise. Put him in a cage two feet wide, two feet high and four or five feet in length. Let this have wire sides and top. Place it in warm room. He

needs a free circulation of air. When a hare is cuddled up and squatty, has no motion of the flanks and ribs apparent, you may be sure that he needs warming with hot ginger tea or capsicum tea. Turn it down his throat with a teaspoon. Put him in a hot room and keep him there for from thirty to forty-eight hours.

If the cold settles in the head there is often a case of labored breathing when there is no inflammation. This distinction should be looked for. An application of the oil of eucalyptus to the nostrils will prove beneficial and if there is any accumulation of mucous in the nostrils this will soon be shown. In this case the hare needs tonics. This condition often comes on in from twelve to twenty-four hours and so suddenly that, if you have not seen your hares in that period, you cannot tell in what condition you will find them. A cold in the head can be thrown off when the hare is in excellent condition of health, but, even if it is not cured he may linger for months, occasionally having spells of sneezing and throwing off excretions, for a few days when he apparently recovers, but the same condition returns again later on. This may go on for some time, but a second cold contracted under such circumstances, will usually create sufficient inflammation in the throat and lungs to cause death. Therefore, the simplest cold should be cured. The lightest of attacks should be followed up until complete recovery is attained.

Neither the doe nor the buck should be used for breeding purposes when there is the least sign of a cold in the head or a discharge from the nostrils or any ill condition whatever. For the hare will certainly transmit this disturbance to its offspring and, in this way, the condition may be perpetuated through many generations until we have bred what may be accurately termed, in the accepted nomenclature of all breeders



FAIRY QUEEN, imported by Bonanza Rabbitry, Dec. 3rd, 1899.

At six months of age; weight $7\frac{1}{2}$ lbs., score $94\frac{1}{4}$. Sire, Champion Priory Prince; dam, by Red King
he by Champion Unicorn. Reserved as a breeder,

of live stock, a thoroughbred sick hare. We have got now to a point where the dozen and one remedies offered and termed snuffle cures have perhaps, in some instances, been of slight benefit, but only when there is a slight attack of cold and the animal is in excellent condition and has had excellent care. Care and good nursing are worth ten times as much as the patented and greatly lauded remedies which promise to cure any and all cases in any and all latitudes, a proposition that is irrational to start with.

We find that colds will affect the hare in five different and distinct forms. First we notice a light, or thin, watery excretion from the nostrils and the hare wipes his nose with his forepaws and on these, extending from the foot up to the knee, may be seen marks of this nose cleaning process. The hair on forelegs will be stuck together and is usually more or less moist and yet the nostrils, without close examination will exhibit no signs of a discharge. This is really the first evidence of the hare having taken a cold.

When this is allowed to run along until he takes a little more cold, and the former condition being aggravated, produces a heavier discharge, frequent blowing of the nostrils and continuous and prolonged spells of sneezing, where the hare turns his head to one side and strikes at his nose with both paws, or only with one paw when the trouble seems to be located in only one nostril. The excretions are now usually heavy, though sometimes nothing comes from the nostrils for two or three weeks, then the discharge becomes heavy and often of a mucilaginous, transparent nature. By this time, in 90 per cent. of these cases, there will be more or less constitutional disturbance, and the hare will appear dejected. His ears will lie back on his neck. His eyes are dull and sleepy and he will sit in his pen and crouch; often he eats but little, though this latter rule does not always

apply as he will sometimes eat with great avidity. By this time he is feeling badly in head and stomach and the reflex action of this condition of the stomach is usually upon the lungs when there is a slow decomposing state in the pleura, gradually contracting the lungs and the respiration is slow and partially suppressed. When this is noticeable you may decide that the hare has serious lung trouble. When this condition is allowed to run its entire course and death ensues, a post-mortem examination will reveal a heavy, cheesy substance between lungs and the ribs of a green cast, though sometimes a heavy white pus like bonny-clabber will be found throughout the lungs, and the heart is sometimes wholly or partially covered with a membranous coating.

Another form that a cold will produce, instead of the thick, mucilaginous discharge from the nostrils following the watery discharge is nodules or abscesses, sometimes on the shoulders and sometimes on the sides and back and underneath the forelegs. In this form a thick, cheesy pus will, if allowed to grow often extend over a large area of the body underneath the skin and, of course, cause death. In this form the hare is also dejected, and crouches in his appearance. Left to himself he will often linger on for weeks before death ensues. With this form there is usually but little inflammation as there is in cases where rapid and labored breathing is manifested. There is usually some mucilaginous coating about the nostrils and this is often of a yellowish cast and seems to dry down and adhere to the fur, making a crust-like appearance and, not infrequently, causes the hair to fall off and the skin underneath to appear very much inflamed. Now this is the form where the cold affects the skin instead of the internal organs.

Still another form in which a cold will effect a hare is with little or no

external signs whatever except perhaps a slight watery discharge from the nostrils for two or three days and, more often, only a day. The first real external notification that anything is wrong with the hare, aside from this discharge, is that he has a drawn up leg, usually the hind leg. The cords of the hip and thigh appear contracted and there is considerable soreness. The hare moves in a crouching manner when he moves at all. This soreness or contraction of the cords sometimes affects the front leg and shoulder similarly and another sign is that the head is turned to one side carrying a stiff neck as though he had been bruised or had a boil on the neck. Here is an illustration of how a cold will affect the system when it settles in the blood instead of in the vital organs or the skin. The reflex action is upon the liver and the liver controls the cords and nerves and almost invariably, when the head is turned and twisted, the hare is nervous and excited and acts rather wild, especially when taken up. If the hare turns the head to one side, that is, rolls the top of the head towards the floor, there is invariably a stoppage of the nostril on that side, far inside the head, and at least a great deal of irritation, all caused by the cold. Occasionally the cause of the twisted neck is abscess in the ear, often caused by a cold.

Yet another form in which the cold will affect the hare is that it settles directly in the lungs and larynx and, in this form, there is usually labored breathing early. The head will be thrown up in the air and there will be noticeably rapid vibrations of the sides and flanks, especially of the flanks, and very little motion of the lungs which are sore. This is acute inflammation of the lungs and must be removed at once or death will ensue, usually within forty-eight hours.

An intense thirst always accompanies this last form of inflammation.

There are oftentimes external manifestations of a cold, such as the so-called canker in the ear, inflammations and discharge of the eyes and occasionally a case occurs where a serious bowel trouble arises, but this is almost invariably the result of an unusually large supply of green and succulent food allowed the hare at the time he contracted the cold and before the cold was noticed. The result is usually diarrhoea and occasionally an intense inflammation of the bowels.

Strange as it may appear, hare breeders have voluntarily, and with no knowledge of the peculiarities of the various forms of illness affecting the hare, characterized about every form of a cold where there is any trouble of the nasal passage or the respiratory tract as "snuffles." If a hare blows through his nose he has the "snuffles," if he turns and twists his head and there is a discharge from the nostrils, he has the "snuffles," if he throws his head in the air high, some have learned, it is true, to call it pneumonia, but this is about the extent of the names that are applied to the various forms of a cold.

A chronic condition resulting from a cold will linger with hardily-constituted specimens as long as two years and they rarely ever get thoroughly well. Each time that they take a cold the old condition is aggravated and there is an irritation of the mucus lining of the nasal passage that usually, with the appearance of each succeeding attack of a cold, becomes inflamed and swollen, and nearly, or quite, closes the passage way and provokes the hare to try to open the passage that he may get air and to do this he makes vigorous efforts at sneezing.

The hare whose lungs are involved never sneezes and rarely ever blows his nose. When he gets to this stage it is almost impossible to save him. If the nostrils seem to be clogged and discharging a heavy, frothy substance, you may rest assured that the lungs are seriously

involved and it is doubtful if any treatment whatever will effect a cure.

The proper way to cure this trouble in the various forms is to attack the original cause, which is a cold, and the only safe course to pursue is to watch the hare's nostrils and more especially the inner side of the front feet and an inch or two of the forelegs above the feet, or that portion the hare uses for a handkerchief.

At the first appearance of any gumming up the fur of the front feet, it is the most simple thing in the world to remove the cause, which is a simple cold in the head. To overcome this is to cure all the disease except where it may be characterized as intense inflammation in the lungs, described in the fifth and last form in which a cold affects a hare, and also in that form where the hare seems to have the cords of the legs drawn up, and the first appearance that he has taken cold is manifested in this way. Local treatment of the nostrils with the proper medicament, together with the use of the proper formula for internal treatment, which may be mixed with the grain or the drink, is the only safe way to remedy these serious troubles and to prevent losses.

With the nodules the proper thing to do is, as soon as they are swollen to the size of a hazel nut or a little larger, to lay them open with a lance, cutting lengthwise of the body or the limb, and making a large opening, removing the pus if any has formed, which will probably be the case, though there will be more the third or fifth day later, but there is no use waiting this length of time. Having cleansed the sacs, apply a lotion, or embrocation, that will tend to allay the inflammation of the skin and flesh, when healing will take place in a very short time, or as soon as the constitutional condition is normal and a thrifty growth follows.

If the contracted cords and distorted condition of the limbs prevail, subject the hare to a high temperature by mak-

ing a cabinet that will allow his head to protrude, and then subject the body to a temperature of about 105 degrees, which is the best external treatment possible. Rubbing with the proper liniment is good, but invariably internal treatment must be employed if the cause is internal, and it cannot be reached in any other way.

In the case of inflammation of the lungs, if taken as soon as the trouble arises, or as soon as you have noticed any unnatural and rapid breathing and vibration of the body at the flanks, in all cases where the animal is not extremely old, it may be cured in from one to three days. And usually the beneficial effect of proper treatment is felt in about twenty to thirty hours. Here again the high and uniform temperature or hot-air treatment is required and is of the utmost value in combination with the internal medication.

In all cases of illness restrict the use of cold drinks and employ as hot liquids as the hare will take, and often when thirsty they will take hot milk, when they will not touch it in the natural state of health.

Always dilute the milk with hot water, as it is better to give it in this way than in the full strength. A gruel made from lightweight bran or rolled oats or rolled wheat, the gruel being strained, is the best form of food and should be furnished from three to five times a day. This should be made of about the consistency of a heavy soup so that the hare may lap it up. In any case give all the hot drinks that the hare will take and as often as he will take them, and when there is inflammation of the lungs, bowels, etc., he will take his medicine in this way and it should be given to him as often as in one-half hour doses.

For the disturbance in the ears and eyes and the watery discharge from the eyes confine the hare in a chamber where high and prolonged heat may be employed, and by this means, together with

internal treatment, the trouble may be overcome. Then use a dropper and drop into the ear one-half of the following mixture—One teaspoonful of sweet oil to which has been added two to three drops of oil of eucalyptus, one to three drops of spirits of turpentine and three to five drops of laudanum. This is about the best local applications. In applying this, hold the hare fast in the natural position with the head and ears erect so that the oil may flow against the drum of the ear. This same proportion, but of one-half the strength of the eucalyptus oil and the spirits of turpentine, applied with the dropper to the eye two or three times a day will overcome the external appearance of the cold there.

Camphorated oil is excellent to apply to both the ear and eye.

Hares will take on ill conditions when kept in large herds just the same as other animals, like hogs, sheep, cattle horses or poultry. Any rabbitry having five hundred head must expect to lose several animals every month, the oldest and youngest included. Every one embarking upon this business should admit that it possesses some obstacles, or is likely to develop conditions that will upset some of his calculations and to decrease the estimated profits. He must allow a percentage for wear and tear, but the wonderful fecundity of the hare more than offsets all these losses.

There is no well-established *medica* that can be prescribed and procured at drug stores and kept in stock covering the different forms of maladies that arise in hares as results of simple colds. The author has experimented for a period of five years with every variety of disease arising from this case; has dissected many dead hares thus affected and killed many in different stages of these maladies in order to note their condition and the effects of remedies upon them. He has perfected certain remedies, from materials that are not found in the drug stores, which are the nearest to an absolute cure of anything

that he has discovered. The best of these is a lotion which is injected into the nostrils of the hare with a small glass syringe, at the first attack of a cold. This lotion is a powerful antiseptic and prevents the growth and accumulation of the microbes that cause the intense inflammation which works all the mischief. For this is a germ disease and contagious as such. This remedy although powerful, is entirely harmless and if a portion of the treatment finds its way into the hare's stomach so much the better. It will assist in the cure. This remedy has proved very satisfactory in a great many cases. It is a vegetable preparation.

Compelling the hare to breathe hot air, in severe cases, is the best thing to be done, and gives the quickest relief. But a hare cannot be given a sweat, as a man would be given under similar circumstances. But a mechanical device may be arranged for heating hares and also a cabinet for giving inhallations by medicated hot vapors. This will produce excellent results when repeated three to five times a day, at first, gradually lessening as the hare recovers. This device has saved many hopeless cases and, where high-class hares are as valuable as they are now, such a device is of great value and well worth the using. The remedies employed in this cabinet are simple and comparatively inexpensive. Its use requires little time as this method is the quickest of any in securing definite results. But even this does not reach every case, even when no good reason can be assigned for failure. Still, it is a grand thing to have at hand, for use, on occasion, in connection with the internal remedies mentioned and the lotion and liquids recommended.

We cannot account for these epidemics among hares any more than we can account for epidemics among men. Hares are undoubtedly unusually susceptible to the influences of atmospheric

changes and conditions. It may be laid down as a general rule that a treatment which will not cure a simple cold will not cure snuffles, so-called. Neither can pneumonia be cured except by curing the cold, or the cause.

The lungs in the wild hare, living in a natural state, are his strongest organs and the most important. They are the most perfectly developed for he depends upon his speed in running to escape from his foes, and speed and endurance depend, in turn, upon his breathing capacity. Now, when the hare is deprived, by disease, of the use of his lungs he is deprived of the strongest member of his body. If hares are deprived of exercise their lungs are weakened, just as a man's arm withers if put into a sling and deprived of use. In this weakened condition, if the hare takes cold or if injurious atmospheric conditions arise, the lungs and respiratory tract easily become affected and the hare is usually too weak to withstand the attack. Hence the great loss from difficulties of the lungs, throat and nose. Roomy pens, a speed course for exercise, and an opportunity to burrow in the earth will do more, in the long run, to prevent these losses than any remedies available, because they afford the conditions that make the hares healthy and develop not only their lungs but their other vital organs as well.

COLIC IN YOUNG HARES.

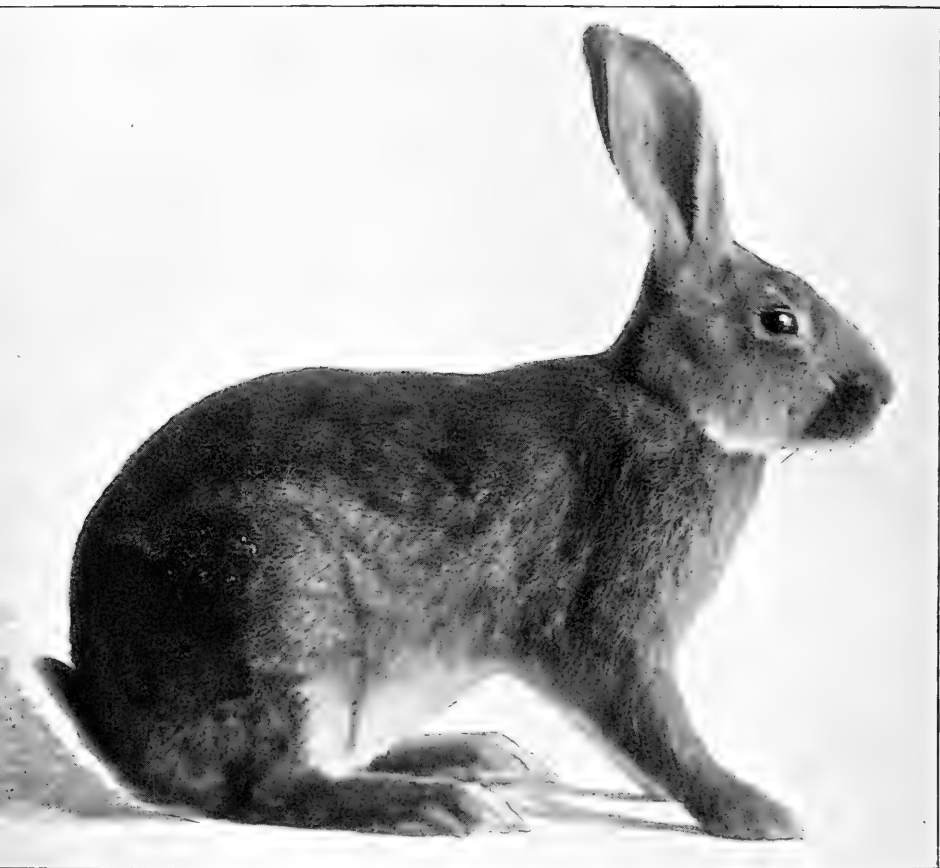
Occasionally a nursing hare, four or six weeks of age, will have an attack of colic or indigestion through the excessive use of cold drinks and will lie apparently dead, or, if in great distress from this cause, will lie on his back and kick and squeal. For this trouble give him two or three teaspoonfuls of pepper or ginger tea, or of essence of peppermint or cinnamon, diluted with hot water, or hot sling of whiskey, prepared just as you would prepare it for a child. Milk is even better to mix with these than hot water. Even when apparently dead

the hare may revive if kept warm. Take him away from the dam for a few days and give him a little milk to which a little sugar has been added. Do not give him very rich, heavy milk, better skim it or dilute it. After from two to five days he may be replaced with the litter and, ten days later, you would not know that anything had ever happened to him. Proper methods of feeding will usually avoid this difficulty, especially if the little hares have their hot water three times a day up to ten or twelve weeks of age. At that period they get their new teeth, commence to eat coarser and stronger food, to chew their cuds and, in general, to take on the airs of full-grown animals.

VENT DISEASE.

This unintelligible term is to the amateur very indefinite. Why it was ever applied to a diseased condition of the genital organs of the hare is unexplainable. It comes from England and was first heard in this country about two years ago when, a shipment of a few head proved to be contaminated with a form of disease similar, in some instances, to gonorrhea in the human family. In others it takes the form of syphilis, ulcers appearing in the genital organs and nodules forming on the hind feet and hindquarters of the hare in both sexes.

As yet there has been no great loss to any individual breeder, but, collectively, the loss would undoubtedly amount to several thousands of dollars. This disease has baffled the skill of all who have attempted to cure it and this is not, by any means, the worst phase of the situation. A disposition on the part of a few perhaps a very few, breeders who have been caught by this trouble, to either ignore or excuse it as little or nothing and then pass the stock on to others totally ignorant and unsuspecting, who have, in turn, repeated the method of making themselves whole, has been the cause of great loss. The contamination



RUBY PRINCE at 5 months of age. Property of Bonanza Rabbitry.

Weight $7\frac{1}{2}$ lbs., score $95\frac{1}{4}$. Sire, imported Rochdale, winner of the great Rochdale prize in England in 1898; dam, Lady Alden, daughter of imported Lord Banbury and out of imported Melba, a doe whose product brought to her owner in the year of 1899 a sum of \$1400.00. Reserved for our stud.

extends to many herds over a great area of country. In fact, it may be said that nearly every section of the country that is engaged in hare breeding, has suffered more or less from this trouble.

Up to this writing nothing has appeared in print, either warning or informing the public of the extent of this trouble. Unquestionably its origin may be located in England, and, yet English breeders have withheld all information of the presence of such disease and many unscrupulous breeders have taken advantage of the opportunity to unload diseased stock upon unsophisticated Americans. That it is possible to gain any information from them as to the source of the disease is very doubtful. Communications upon this point bring no replies or even references to the inquires. Evidently they prefer to give us the impression that they are totally ignorant of the subject.

The extent to which this trouble may involve the interests of the Belgian hare industry, in this country depends wholly upon the honor and intelligence of American breeders. The only safe and sure cure for this disease is the axe, a thorough application to be made at the back of the neck down to, and through the windpipe and jugular vein. "Stamp it out" should be the motto of every breeder and spare not an infected animal, be his qualities what they may. He should allow no animal to leave his place unless he has positive knowledge as to the perfect freedom of that animal from infection, and unless he knows that the hare has not been exposed to contamination. Never, under any consideration, allow a specimen to be harbored upon the place, when diseased, to enter a box, or to, in any way, occupy quarters that may be occupied by another hare.

There is a possibility of contamination extending to perfectly sound and healthy stock without actual contact of the reproductive organs. One laying the foundation for a herd should take every pre-

caution to be absolutely certain that his stock is free from this disease: In fact, he should exact a guarantee and from competent and reliable breeders. Once having secured a perfectly healthy buck or doe, the price of safety is "eternal vigilance," and never take any chances when a doe is to be served by a buck, if the doe has already been served by another buck. This should be made a matter for investigation and the owner should furnish certificate of breeding from the owner of the buck that previously served the doe and allow the owner of the buck whose services are applied for to investigate and satisfy himself that he is taking no chances. A thorough examination from external appearances, while usually sufficient, nevertheless, does not give absolute evidence that no contamination of the system has, at any previous time, occurred.

The degrees of infection vary and some light cases may be, by stringent methods, quite well hidden, at least for a time, though usually the entire organism becomes involved and the infection breaks out at a later period and destroys the animal. Usually the does served by an infected buck will show the symptoms in an enlarged, swollen and inflamed vulva, for a period of fifteen to sixty days. A great deal depends upon the constitution of the doe, her care and her opportunities for cleanliness and for inhabiting cleanly quarters and of coming into direct contact with the earth. The earth elements are the greatest absorbents and the greatest alleviators of inflammation and undoubtedly the best assistant in overcoming such trouble would be to allow the hare free contact with the earth and to enjoy all advantages of burrowing and lying upon mounds of earth. This course of treatment, so far as known, has never been employed, but it is unquestionably worthy of the efforts of the investigators and experimenters. Blue clay soil would undoubtedly allay the external inflam-

mation and this employed at the outset, if one could know that contamination had taken place within say, a period of two or three weeks, would probably stay the ravages of the disease, but there is no certainty of this.

Weakened constitutions in the progeny are certain to follow the infection and a fine strain of blood may be practically be destroyed by simply one infected hare in a herd. The symptoms in a male are practically the same as in the female. The sheath becomes inflamed and enlarged and little pustules or small ulcers form, oozing out a watery excretion, which, later on, becomes acrid and extremely irritating. The hare usually, through licking the parts, contaminates his entire organism with the poison, ultimately causing his death. This usually ensues within a period of three to ten months after contamination.

CAKED OR SWOLLEN BREAST.

A caked, or swollen breast in a doe, will occasionally occur and usually results from contracting a cold soon after parturition, though the same conditions will occur at any time during the nursing period.

These inflamed glands should be treated by hot applications and this treatment followed up with vigorous internal treatment for the purpose of removing the remote cause which is a cold, excepting when bruises result from accidents or injuries, etc. Poultices, friction, lotion, etc., will usually overcome this difficulty. If the glands become unusually enlarged and continue to increase in size and the inflammation becomes intense and this condition exists for two to three days it will usually be necessary to open the glands with a lance, making quite a large incision. Do not be afraid to use the knife in this cause.

If suppuration has taken place the white, cheesy-like formation of pus should be removed by pressure and the

cavity cleaned with the proper medications, either a lotion or a paste, and recovery usually takes place in a very short time. When the pus is allowed to remain any length of time sinuses will form from one gland to another and these glands will, in turn, swell and suppurate and ultimately destroy the animal.

At weaning time youngsters should be labelled or marked in some way.

We have found aluminum labels placed in the ear to be the most satisfactory of any method, as we do not believe in disfiguring methods of marking. In fact, we believe that these are not only cruel, but detract from the beauty of the specimen. The custom of marking hares by making holes and slits in the ears should be emphatically condemned as should also be done to the branding of hares, with hot irons in any section of the body.

Never mar the beauty of the hare. The aluminum ear label is as light as a wafer, and is quickly and easily put on without any distress to the hare, or without even drawing a particle of blood. It is a rare thing that the hare ever moves when it is correctly done. These labels we invented and make in a series, numbering consecutively from one to one thousand (1 to 1000,) inclusive.

THE HARE AND MOTHER EARTH.

Construct at least one pen to every four does kept as breeders, so that the doe may burrow to her heart's content during the period of gestation, up to within three days of the time for her kindle. This arrangement will insure you against 90 per cent. of the illnesses common to breeding does and also prolong the lives of the does by at least one-third, while fully 50 per cent. of the losses in the young will be avoided. Another advantage will be removing the tendency to wry front feet and weak kneejoints which give to a hare a bear-shaped front foot, all of these defects being directly attributable to the en-

forced change of conditions from those natural to the rabbit family in freedom to dig with the front feet. This use of these instruments for burrowing is by Nature intended as a means of protection from beasts of prey to the doe and her young. In the wild state the buck rabbit does but little digging, though he will assist the doe a little in making a burrow. But speed is his chief means of protection though he will, when hard pressed, use the burrow in which to hide from his enemies, but he roams and changes his locations and is more liable to meet with enemies than is the doe, who keeps closer to her burrow, which she constructs not far from her original home burrow.

Wry front feet and weak knee joints are the outcome of keeping hares on a surface into which they cannot burrow, and also when closely confined, as in the box hutch, where they cannot run. This method compels them to simply sit, bearing their weight upon their front feet, and with little or no other use for them, they grow weak, and each succeeding generation brings about a more pronounced condition of this ill shape.

Take from the box hutch a matured hare with decidedly wry front feet and turn her loose in a paddock and allow her to burrow, and within six months' time her front feet will be practically straight. She will be up on her toes, and be so vastly improved in this respect that one would be unable to identify her. In fact, her whole shape will change, as will her spirit and ambition. A hare when digging a hole strikes with one paw right over the other and brings them close together. A wry-footed hare has the feet turned out at an angle away from each other, and when they come to dig the effort to bring one foot to strike the earth at the same point where the other struck it brings about the change and results in overcoming this defect and straightening the feet.

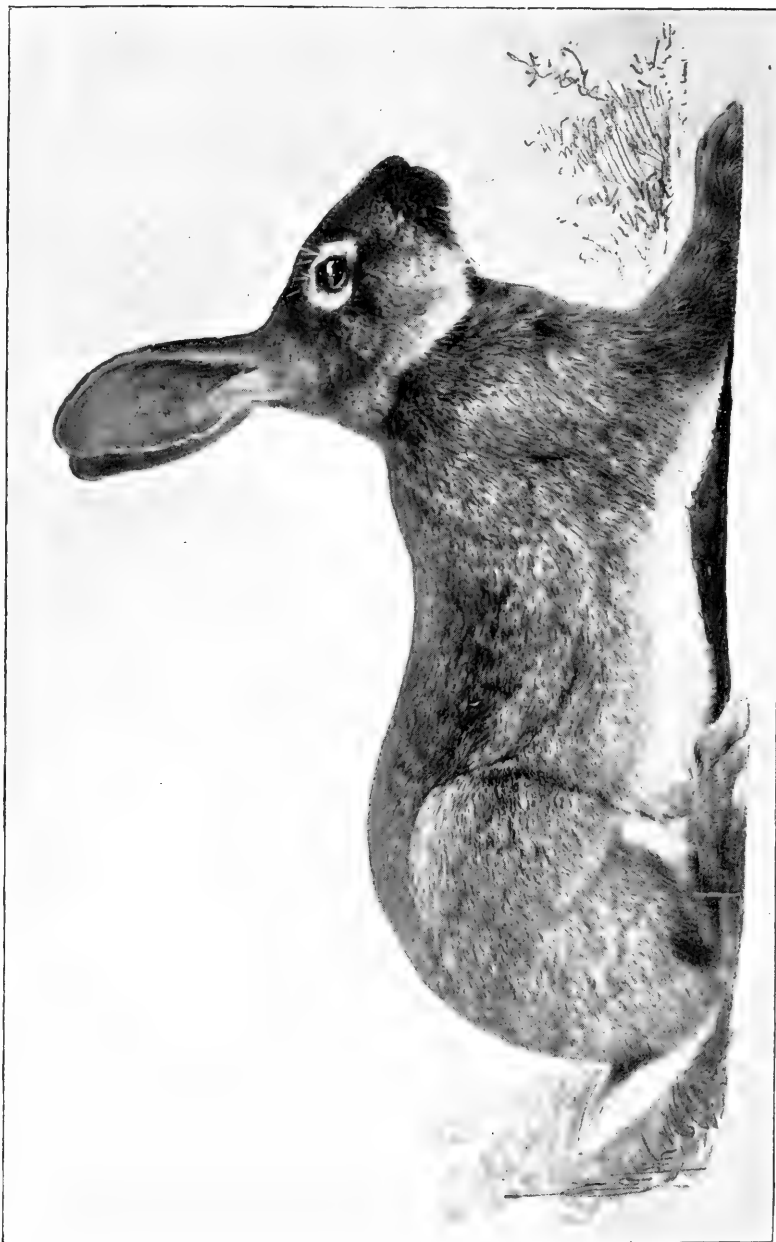
A hare resting in a box with no use for her front feet other than to hold

her up becomes weak and deformed, and, like a man's arm in a sling, the foot loses power and shape. It is true that a doe that burrows widens out her foot, increases the size of the bone and the tendency is to shorten up the length of the front limb, and it is therefore doubtful whether, if hares are allowed to burrow, we shall be able to establish in the type of the rabbit family of which the Belgian hare is the product the long, slender limb found in the true English wild hare, for the wild hare never burrows. He is a rover and extremely fleet, needs no burrow for protection, and the does drop their litter in a little wisp of a nest under a bush.

The young are born with hair on and their eyes open, and in a day or two are able to take care of themselves. The little, cup-like nest constructed for their abode is soon abandoned, and they, like their ancestors, resort to their fleetness and extremely fine sense of hearing to protect themselves from their enemies. The wild hare produces only two litters a year and a pair at a time. The extremely fine and racy build which is always found where there is a grace of movement in the highest degree is the aim of the Belgian hare fancier.

The wild hare will not thrive in a state of captivity, and will produce but little, if any. A state of captivity or confinement is so decidedly contrary to the requirements of his nature that it would be like attempting to make him walk upon his head, while the rabbit family lives in closer quarters and yields to confinement better. Still, with the rabbit there is a limit, and this limit has been found to be best suited to them when about 3x16-foot pens are used for a single specimen.

Undoubtedly the fancier will find that to allow his hares an occasional treat of freedom to burrow will result in an increase of vigor, an increased longevity, and increased prolificness, an increase of size, increase of shape, and certainly a less percentage of disqualified specimens in



BEAUTY NOBLE at 7 months of age. Bred at Bonanza Rabbitry.
Weight 8 lbs., score 95%. Sire, Lord Britain; dam, Bonanza Beauty. Reserved for our stud.

both wry front feet, weak knee-joints, and small and shapeless eyes. The bold, beautifully-colored, wide-open, round-shaped eye is less likely to result from stock confined in close and dark hutches than in open-air, broad daylight pens in which the hare may jump and run, enabling him to expand his lungs and to give practice to his limbs and glands and to develop every part of his body.

SOME HOBBIES OF THE ENGLISH.

English fanciers, with all of their skill and experience and their undoubted talent for mating specimens to produce good results, still cling to some very peculiar notions and hang on to them with an obstinacy that seems very unprogressive. They confine their hares in little coops, two feet by four by two, boarded solid on every side, and top, with little peep-holes and slits for ventilation. Even these are so arranged as to be closed up tight at every little change in the weather by means of a board that slides over them.

How utterly irrational this notion is may be seen by the reports of judges at the English exhibits of hares. These reports show that two in every five of the hares offered in competition for prizes are afflicted with snuffles. If this is true of the choice specimens, selected for competition, what must be the state of the unfortunates left at home? It is a most absurd and inhumane practice in any climate. No wonder a hare brought up in this way falls sick in being transported across the Atlantic and and the continent to the anxious breeder in Los Angeles who has paid a big, round sum for him, and is hoping through him to raise the quality of his herd.

This persistency in devising means to shut off all air from their hares has been carried to such a point by English breeders that there appears to be only one more step for them to take, namely to apply an air pump and thus exhaust the air in these little coops as fast as it creeps in. The first reason that they

give for this ridiculous custom is the fear that their hares may take cold. A second reason which they allege is that the glossy coat of the hare is bleached and therefore spoiled by the light of the sun. To avoid this they are kept in darkness. The gloom of the closely-confined hutch is supposed to give a darker and glossier quality to the fur. Possibly this is true. But, if true, it is contrary to all common sense and sound reasoning. For everybody knows that the coat of any animal is at its best when that animal is in the pink of condition, which can only be possible when the animal has freedom, air and sunshine, an opportunity to stretch every muscle, to exercise every organ and to expand its lungs with pure oxygen, creating pure, strong blood.

A hare cannot develop and grow strong and vigorous, in a dungeon, any more than a man can. Nature is always the best guide. Place your hare as nearly as possible in a state of nature. Give him a pen where he can make a choice between sunshine and shade. Instinct will tell him how to combine the two, how long to remain in the sun and how long to linger in the shade. He will live in such a way as to maintain the highest possible condition of health, and that means the best possible condition of fur, always.

Give your hares freedom, air and sunshine and plenty of wholesome food. Breed scientifically. Practice grooming, with the brush and with the hand, every day when preparing specimens for exhibition, and the best in external appearance will be the result, supported by a constitution which will enable the hare to live long enough to see from ten to fifteen generations of his progeny. Not only will he himself have health and therefore happiness but his owner as well will derive a thousand times greater pleasure from his free and robust condition than he could possibly derive from the possession of a weakly specimen, too delicate to endure the fresh and invigorating breezes of heaven.

DETERMINING THE SEX IN YOUNG HARES.

It is almost impossible to distinguish the sex of a hare before he reaches the third or fourth week of his existence without going into very minute methods of examination.

To examine him take him by the ears and skin of the shoulders with the left hand, lay him over on the small of his back exposing the parts to a bright light. Place the forefinger of the right hand on the skin between the anus and the tail and the thumb about one inch from the finger, and toward the abdomen, and press down and outward, extending the distance between the finger and thumb. This will expose the parts and in the male a very small but round orifice will appear with smooth surface of skin between this orifice and the anus of perhaps from one-third to one-half inch when at the of four to five weeks. With the female there is none of this space and the orifice is oblong and apparently extends right to the anus and, when well stretched, will expose an opening about one-fourth to three-eighths of an inch in length.

Amateurs often make mistakes in examining hares to determine the sex, especially in the very young animals. It is well to examine frequently though you may have thought that you have settled the question the first time. This rule should apply especially when making selection at a very young age.

TO CASTRATE HARES.

Bucks may be castrated when about four months of age. Occasionally a few will develop the testicles so that they may be found and removed at about three months of age, but as a rule four months is the best age.

An assistant is necessary to perform this operation, he taking the hare in his lap while seated so as to hold the lap on a level, and turning the back of the

hare towards him and taking a front and hind leg in each hand holding the hare solid and exposing the parts to the operator who stands in front.

The operator should take the testicle lying on the left side first, pressing the thumb and finger from the abdominal cavity back toward the anus, and when the skin of the scrotum is well stretched, with a single stroke open the scrotum. It is necessary to cut deeply enough to lay a good-sized opening in the scrotum and to do this usually the testicle will be laid open more or less. With the left hand take the testicle from the scrotum, drawing it out slowly and for something like two or three inches. Now, with a knife, remove, or separate, the artery and the spermatic cord, cutting upward and leaving a little, pea-like shaped bulb on the end of the spermatic cord, cutting between this bulb and the testicle proper, allowing the cord to drop and return to the scrotum.

Commence about two inches from the testicle to scrape on the sides of the artery downwards with the edge of the knife, making a light and slow drawing stroke with the edge of the knife and downward, touching the artery a little lower or nearer to the scrotum with each stroke perhaps a dozen or twenty of these little fine cuts with the knife are necessary to wear down before severing the artery, which should be done well down, close to the scrotum. When this is well done but little blood will be lost. If the artery were cut square off a great deal of blood would be lost, probably resulting in the hare bleeding to death.

Repeat this operation with the testicle lying on the right side and the job is done. It is not necessary to apply anything to the parts unless it be in hot weather when a little pine tar may be applied to the scrotum and surrounding edges of the orifice to prevent flies from settling upon the parts and blowing. Never put water on an open wound in a hare. No special treatment or care

is necessary before or after this operation, excepting when the young bucks commence to fight before castrating.

Often one or two of a litter or penful will develop fighting propensities much earlier than others and will even make cuts and slashes in their companions and keep all within their reach in a state of fear and more or less feverish. Hares should be in a normally healthy condition when castrated. This is the most essential feature to look after. Never castrate a hare that has a cold or that has been severely excited or chased, creating a fevered state.

Take them from their pens quietly and carefully and remove them for some little distance from the pens containing the other hares who are to undergo the same operation, where they will not hear the hare if he squeals. Occasionally one will set up quite a howl though this is rare. The hare is an extremely sensitive excitable animal and he may be scared nearly to death without having been touched.

Probably 95 per cent. of the hares castrated at this age will, within three to five days after the operation, appear as well and natural as before the operation. The only difference noticeable is their disposition to remain quiet during this time. In fact, after being castrated, they are always quiet and usually this operation puts an end to all disposition to scrap or chase another. Castrated hares will, upon less food, make more rapid growth, more flesh and of better quality than the entire specimen will furnish, or the does. The operation of unsexing a doe is impracticable as it is necessary to cut through the peritoneum, the inner skin covering the intestines and holding them in place, and this involves great danger. In fact, with the hare it is a very difficult matter to remove the ovaries and save the life of the doe, that is, excepting in the hands of an expert of the highest order. There are many conditions that the average

inexperienced person would not be likely to be able to control.

DIRECTIONS FOR COOKING.

There are very many ways of cooking the hare and variations to suit the tastes of individuals will occur to almost every housewife and caterer. We present a number of those that we consider the best and the most thoroughly tested. Hares between three and six months of age are the best for cooking but older ones are good if they are fattened rapidly. An easy way to determine whether a specimen, bought dressed, is young is to try the jaw between your thumb and finger. If this breaks easily the hare is a young one. In young hares the coat and claws are smooth, but are the opposite in older animals. The ears of the young may be easily torn. If a hare has been killed recently the flesh will be dry, white and sweet. If for a longer period it will be blue and unattractive in appearance. Most people prefer that hares for the table should be killed one day before being eaten.

Hares intended for the table should be rather close penned for ten days or two weeks before killing and should be fed on cured grass, rolled oats, rice, a little sugar and scalded milk. If fed on coarse and dry food the delicate flavor will be lacking. Young bucks caponized when two or three months old make the best eating. The more rapidly the hare is fattened for food the better the flavor. Great attention is paid to these fine points in the Old World where the Belgian has long been the delight of epicures.

To our minds the best way of cooking the hare is to steam it in a double cooking-dish such as those used for making delicate puddings, mushes, etc. Add just sufficient water to fairly cover the meat. Then let it steam for about three hours in its own juices, seasoning while cooking with pepper and salt to taste. Butter may be added or the gravy may be



BONANZA KING at 10 months of age. Property of Bonanza Rabbitry.

The longest bodied buck seen on the continent. Sire, Champion Yukon; Dam, Princess Second. We have many of his daughters reserved as breeders.

thickened with flour or cream; the latter makes a delicious dressing. Serve hot on toast. Prepared in this way the meat is very tender and appetizing. This is the best way of cooking for invalids, as all of the juices are preserved in the gravy and the meat is so delicate and tender that it is readily digested. No other meat dish can be so appetizing and at the same time so harmless as this one.

A lady friend of ours has recently given us an attractive variation of the above by frying the meat, after it has been steamed as above directed, to a delicate brown in a batter of egg and bread crumbs.

HARE PIE.

Hare pie is fully as satisfactory as chicken pie. Boil for perhaps an hour, or until the meat is fairly tender. Prepare a biscuit crust the same as for and old-fashioned chicken pie. Line the bottom and sides of a pan with this, place the hare and the gravy inside and cover with more of the crust. Also inclose half a dozen cubes, three of lean and three of salt pork, each about two inches square. Bake in a quick oven from half to three-quarters of an hour or until the crust is well browned. For those whose digestion is fairly robust this is a splendid way to cook the hare.

STEWED HARE

Should be prepared by boiling two or three hours, according to the age of the hare, till the flesh drops off the bones; thicken the gravy with flour and milk, preferably a little cream, and add a piece of best butter. Always have considerable water over meat while boiling. An abundance of thickened gravy spread upon toast makes a dish fit for any epicure in the country.

Mrs. Rorer, the eminent authority on cookery, recommends the hare as a delicate subject for a fricassee. Her directions are to first brown butter in a hot

iron skillet. Then fry the hare brown on both sides. Next cover with hot water and stew, say for an hour, or until thoroughly tender, seasoning to taste. At the end of the stewing let the hare fry down. This makes a most delicious dish and is preferred by many.

OTHER POPULAR RECIPES.

Broiled hare: For broiling use hares under four or five months of age and therefore tender. Soak for a short time in water without salt or soda. Salt or soda injures the delicate flavor. Dry well with a clean cloth. Gash down the back through the thickest portion. Flatten each hare. Place it on a gridiron and broil over a bed of clear coals, turning often. Or you may lay them smooth on the bottom of a dripping pan, and cook in a hot oven without basting. Oil the pan slightly with a little sweet dripping or a bit of fresh butter. They should be done in half an hour.

Stewed hare: First way, cut the hares into joints. Drop into a pot and cover with boiling water. Then slice in an onion and a bit of bacon, and stew slowly one hour, or until tender. As old hares are best stewed, it will do no harm to put in a young chicken, stewing all together. At the end of half an hour add a few potatoes, peeled, and cut in quarters, and, if liked, some small bits of light paste, after the potatoes get fairly boiling. When all are done stir in a little cream thickened with white flour, boil up a moment and dish for the table.

Another stew: Another way, is to put into a wide sauce-pan a spoonful of dripping, heat it till hot and slice in an onion; any sweet herbs, cut fine, may also be added. Then lay in a couple of hares, cut into joints or whole as may be desired, cover, and heat until they begin to brown. Turn and brown again slightly; be very careful they do not scorch; then add a cup of boiling water, cover closely and stew,

or rather simmer one hour, until tender, thicken over with browned flour or cream and flour, and serve. The gravy in the pan from the stew should be used to make the dressing.

A chafing-dish recipe: This is a steam process. In this method old or young hares may be used. Cut into convenient pieces, place in the chafing-dish and treat to the steam until the flesh leaves the bones by the aid of a steel fork. Cover with a rich cream gravy flavored with sherry wine to taste. As a food for chafing-dish parties there is nothing so delicate or digestible as Belgian hare. If preferred the hare may be steamed until done in a double kettle and placed in the chafing-dish only for final preparation with the gravy and sherry wine.

Fried Belgian: Disjoint and cut uniform pieces, cover with boiling water, and let it simmer until quite tender. Then remove it carefully to a dry dish. Dredge well with flour and drop into very hot butter to brown. Serve with gravy made from the liquor in which it was boiled, and cream. Two tablespoonfuls of vinegar added while boiling is an improvement. A few tablespoonfuls of claret add a gaminess to the dish.

Roast hare: Make a dressing of fine dry bread-crumbs; part graham is best. Add to the crumbs a small lump of fresh butter, a little dry sage (or other herb, if preferred), and moisten well with tepid water, stirring well as you add it. Do not put in too much water; have the dressing light and flakey, not wet and heavy. The large and delicious liver of the hare having been thoroughly steamed, will add an unwonted zest if chopped into bits and put into the stuffing. Fill the hares with this, leaving plenty of room for the dressing to swell; sew up, put the hares into a dripping-pan, add a cup of boiling water, and roast as slowly as possible, during the

first half hour. Baste every fifteen or twenty minutes, turning as needed; and if any part browns to fast, cover it with a clean napkin wet in warm water, and folded two or three times. Allow from one to two hours for roasting; test with a fork, to ascertain when the hares are done, take them out of the pan and make the gravy; drain the grease all off, and set the pan on the stove; then put in any tid-bits (as the liver, etc.), and the liquor in which they are boiled; thicken with a little browned flour wet with milk or water, and boil up a moment.

Grilled hare: Take tender young Belgians not over four months old. Cut down the front, removing any clinging thin skin, roll out flat and pat between the grilling irons over steady, hot coals, basting constantly with butter. A little Worcestershire sauce may be added. If properly prepared the flesh is pure white.

"Hare in the blanket:" Take a large hare if possible, draw well and rub smartly with whatever flavorings intended. Small slices of thin cut bacon may be inserted in the hare as is done sometimes in the case of veal loaf. Roll the hare in a blanket of pastry, or dough which has not enough shortening to prevent a good consistency, and boil until testing with a fork proves the hare to be thoroughly cooked. Drain very carefully the juice in which the hare has been cooked and use it in making a rich gravy, either in browned flour or a flour and cream paste. Port wine or old claret, with a few hot condiments impart to the "hare in blanket," which is usually not considered a rich dish, a most appetizing savour.

Spanish Method of Cooking.—Slice one large onion, one chili pepper, and four medium-sized tomatoes into a stew pan and bring to a boil. Cut the hare into pieces and put into the mixture as soon as it boils. Add one teaspoon of salt and enough hot water to cover. When

nearly done thicken with flour and add butter the size of an egg.

Roast with Onions.—Have a double roaster. Place a layer of onions in the bottom of the pan, then a layer of the meat. Alternate in this way until the pan is full. Roast is thoroughly done. With a double roaster no water is needed as the juices of the meat and the onions furnish sufficient moisture.

Curried Hare.—Cut into joints and place in stew pan with two tablespoons of drippings or butter and sliced onions to suit. Brown well and add a pint of soup stock. Mix a tablespoon each of flour and curry until smooth in a little water; place in pan and add pepper and salt, a teaspoon of mushroom powder; let simmer for an hour or so. Add juice of half a lemon and a little parsley. Serve with boiled rice piled around it at side of platter. Water instead of stock may be used if the latter is not at hand.

Potted Hare.—Cut in pieces and place in stone jar. Fill the space between meat pieces with veal and bacon, a pound each, cut to dice; mix with liver of hare, also cut fine; add a tablespoonful each of mace, cloves and black pepper and salt. Place thin slices of bacon on top, and a bay leaf if liked. Cover with a lid of plain paste made of flour and water. Set the jar in pan or pot containing water and bake in slow oven. Keep from burning by placing a greased paper over the paste. Put no water to the meat. When done set away to cool, then pound pieces of the hare, veal and bacon to a paste, mix in gravy from the bottom when boiled almost dry. Add more seasoning if needed. Press solid into cups or small jugs, covering top with melted butter, and set away in a cool place.

Jugged Hare.—Cut in pieces and season with pepper and salt, fry brown and season with a little thyme and chopped parsley, nutmeg, cloves, mace, grated lemon peel, and add a couple of anchovies. Place a layer of the pieces into a wide-mouthed jar, then a layer of

thinly sliced bacon and so on with alternate layers. Add two gills of water, cover and put in cold water, boiling three or four hours. Remove the jar, take out the unmelted bacon and make a gravy of a little butter, flour and ketchup. Some add a little grated lemon peel.

Minced Belgian.—Take sharp knife, slice the meat thin, and chop it fine. Then crack the bones, put them into a pot with the neck or any remaining portions, nearly cover with cold water, and simmer half an hour. Strain the liquor, thicken and use it as a dressing. When half cold put in the minced hare; if the mixture is not wet enough, add a little cream or milk. Cover the pot, and heat slowly till it is ready to boil; stir rarely. Lift from the fire and pour the stew over a plate of stale biscuits split open and crisped in a hot oven.

The Liver.—The liver is a delicious tidbit cooked in a hundred different ways. Usually it is remarkably sweet and wholesome. On account of its large size it makes an excellent *pate de foie gras*. The liver can be cooked in any of the ways recommended for the tidbits of chicken or turkey.

BELGIAN HARE BAKED.

Take two hares over three months of age, laying them down, baste the two under sides together and fill with a dressing made from bread crumbs seasoned to taste, with sage, salt, pepper and a liberal slice of butter. Moisten with hot water, as it will mix nicely, being careful not to get it too wet, then lay in thin slices of salt pork and sew upper sides together, lard with long strips of the pork, or if you have not a larding needle, lay the strips of pork over the hares and tie them to their place. This is to keep the juices from escaping. Lay the hares in a double bake-pan, sprinkle with salt and pepper, fill the pan half full of boiling water, cover up and bake for three hours in a stove oven not removing the cover until ready to serve. Pour the

grease from the gravy and thicken. A capon six to ten months old is better than a young hare prepared this way.

BELGIAN HARE FRIED.

To fry, use young hares nine to twelve weeks old, fry out salt pork. (Do not use lard.) Add half butter, salt and pepper the hare to taste, flour well and lay in the hot grease and butter, brown nicely on both sides, then add half a tea cup of boiling water and cover closely, and cook for at least one hour, adding more water as needed. Let it cook down but not fry too dry. Take out and make a good milk gravy, properly seasoned, and you never ate a finer dish in your life.

DRESSING THE HARE FOR MARKET.

Care should be exercised in catching hares to kill for table use. They are very active and will jump with great force. If they happen to strike the sides of the pen or any other object they will frequently bruise the flesh severely. Often large clots of blood will form on the shoulders and sides as a result of these bruises. These clots must be absorbed by the healthy blood, if the hare is not killed at once, and so carried out of the system. If they are not absorbed they will poison all of the blood and will also render the flesh very unwholesome food, often resulting in death to the animal. All pens in which hares intended for the market are confined should be arranged with a gate at one end so that the hares may be run into a space three or four feet square and caught without injury. To kill them, hold by the hind legs and strike a quick blow on the back of the neck. This stuns the animal and his throat may then be cut and the hare allowed to bleed thoroughly.

After striking the hare behind the ears with the hand or a small stick, you may either cut his throat or cut his head entirely off with an ax or cleaver. The latter method is probably the easier for most people. Hang the

carcass by the gamble-cords, just as a butcher would hang and stretch a beef or a sheep, to two nails or a wooden bar made for the purpose.

Now slit the skin from gamble to gamble, near to the tail, or directly up and down the edges of the thighs. Free the skin from the hock joints and turn it over wrong side out and downwards. Go slow until you have reached the middle of the body. Part the fat from the skin leaving the fat on the carcass. Use a knife to separate the fat from the skin. Cut the pelvic bone and open all the way down to the end of the neck. Remove the entrails and the feet. Wash the flesh and the dressing is done. Allow the flesh to cool, and if it is intended for market wrap it with new cheese-cloth, and pin this or use round-pointed tooth-picks as skewers. Before wrapping wipe thoroughly dry and remove all blood to avoid staining the wrapping cloth. Always remove the feet at the hock and at the knee joints.

Never peddle live hares from house to house or take them to market until you have received an order for them. This is the most unsatisfactory manner of disposing of any marketable commodity. By dressing the hare yourself you save the pelts and, where the business is conducted on a large scale, these amount to a large sum in the course of a year. They make beautiful buggy robes and rugs. Sixteen pelts will make a robe that will sell at from \$20 to \$25, and six will make a splendid rug. Many other articles for home use could be made from them.

When you once get a customer for hares he is very likely to be permanent and arrangements can be made for a weekly supply to families. First-class hotels and many restaurants will consume them by the hundred. Europeans and Americans who have lived abroad prefer the flesh of the hare to that of any other animal.

To frighten hares, or to cause them to run only a few minutes from fright, produces a change in the lungs shown

by a mottled color. This is due to obstructed circulation, resulting from over-exertion or fear, or both. The natural color is a uniform pink or a very light red. At all times hares should be handled very gently, and any person entering their pens should be very quiet and moderate in his movements so as not to startle them.

RESERVE THE PELTS.

The skins of the Belgians are worth from 25 to 50 cents each in the market, the value depending somewhat upon locality and consequent demand. They make handsome robes and rugs, capes, etc., when properly cut and made up. It is not difficult to make these articles at home and use or sell. Here is a new field for home industry for womenfolk. In this way the pelts bring from \$1 to \$2 each.

A WORD AS TO SHIPPING.

Buyers should insist that dealers ship stock in roomy cages open on the sides and top, inclosed with wire netting, so that when they are stacked up, one above the other as they often are, in express cars, the hares may have some chance to get sufficient air. If this is not done they are likely either to suffocate on the way or to get heated and then chilled, taking cold as a result. We manufacture a crate for this purpose which has met the universal approval of buyers, dealers and express agents, all of whom are interested parties. The business of shipping hares to all parts of the country has now reached such proportions that the express companies insist upon the use of suitable cages, which they return to shippers at reduced rates. Each cage should be supplied with grain and hay, also with a dish of water which will be filled from time to time by the express agents. Tin cups are as good as anything both for feed and water as they may be attached to the wire mesh and are thus out of the way and not likely to become fouled.

For bringing importations from Eng-

land and for shipping hares to long distances in this country we have invented and patented a circular cage that has great advantages. This cage is seven and a half feet in circumference, made of wire with an outside covering of canvas, which may be adjusted to prevent draughts. It is made in sections and a greater or less number may be used as desired. Through the center a cone passes, which is to be filled with sufficient food for a long journey. Each hare has plenty of air and room for exercise. He may travel round and round going miles every day if he wishes. These cages are self-cleaning and in every way the best for the purpose. Our hares, imported in these cages, made the long journey and arrived at Los Angeles in the pink of condition, alert and active as a bird and fit to go at once on the exhibition table, a gratifying contrast with the numerous importations in which nothing but dead or dying hares have been delivered to the unfortunate buyers.

The most careful attention should be given to this phase of the industry. Observation will confirm the truth of the statement that hares, from the tiny youngster six or eight weeks of age up to the oldest of breeding stock, are not a little excited when the attempt is made to crate and move them. This excitability intensifies respiration making it necessary that the hare should have abundance of air and, at the same time, be protected from strong draughts.

The cage that is best suited to ship a hare in is one that will allow him to stretch out at full length, to sit up as is his custom in his pen, and to make at least one hop in some one direction, either in a circle or straight ahead. The necessity for space to move in is greater than at first might appear. With no exercise the hares often become paralyzed with only a few days' journey.

As a rule, a hare consumes but little food en route, especially if it be his first

experience in traveling. Through timidity or excitability he foregoes eating and, except in extremely hot weather, he will abstain from drinking. The crate should always be protected by a cover that will shed water for often in transferring from one car to another, the crates are allowed to stand on platforms, and, during a storm, this exposure to wet often endangers the life of the animal. The hare is decidedly averse to water, excessive sun, heat and strong currents of wind.

Bear this in mind in all arrangements and the greatest risk in transit will be avoided. The supply of food should correspond precisely with that which it has been the custom of the hare to enjoy. Do not make radical changes on any occasion. Always furnish dry litter—sawdust or straw for bedding. This makes a cushion as well as an absorbent and tends to make the hare feel more at home.

Fasten to the sides of the crate little bales of hay and always furnish at least two cups to each compartment, one for grain and one for water, and supply a sufficient quantity of grain in a little sack attached to the side of the crate for the hare. Express messengers are often overworked and have but a moment's time when they happen to think of caring for the hares en route and every convenience should be afforded the messenger to insure reasonably good care of the hares.

Another, and one of the most important points to be observed, is to place a card upon the crate with this inscription:

"To Express Messenger:

"This hare is a valuable animal. Please do not give him ice water, as it is certain to harm him and may cause his death. Kindly let the water stand and become warm, then give a moderate quantity, if possible, three times a day."

Many valuable hares have been

lost while crossing the desert because of being given ice water to drink. If hares have grass, etc., it is proper to supply the same, attached to the side of the crate but, otherwise, do not include any in the equipment of the crate with food for the journey.

CARING FOR HARES ON ARRIVAL AFTER A JOURNEY.

It often happens that hares have been sadly neglected en route, especially when they have been on the road for several days. It is always best to limit the supply of food and liquid for the first three or four days after arrival, otherwise the hare may do himself an injury and bring on a bad bowel complaint or fever and a bad condition of the stomach that will produce evil results, especially if the hare be a doe and with young. The proper course for a shipper is to inform the new owner of the specimen as to the kinds of food to which the hare is accustomed that a radical change may be avoided.

KEEP A COMPLETE RECORD.

An effective and systematic record should be kept of the breeding of every animal in your rabbitry. There are many devices for this purpose and most people will establish such a record as suits their individual fancy. The record may be kept both by number and by name, or simply by name, as preferred. Numbering has the additional advantage of always showing the sum total of the product of the rabbitry at any given time.

A record similar to the following should be kept of all of the matings, giving the number and, if any, the name of both doe and buck, the date of mating, the date of testing, the time when the litter is due, and any remarks that may be interesting for future reference. Each breeding doe should have this record attached to her hutch, showing her name and number, to avoid possibilities of errors. Each time that she is bred

and litter weaned, another card should be attached, a duplicate of the record, stating the facts in brief; namely, the date, number and name of buck, etc. This affords a ready means of reference and saves hunting up the record in the more permanent record book.

Of course, every breeder will keep a day-book and ledger in the ordinary style of books of account for any business. This will show not only the aggregate profit from the rabbitry, but the record of each breeding buck and doe; for a ledger account should be opened with each promising member of the rabbitry.

Following is an illustration of a convenient form for pen card:

Name animal	No. of pen	Sire	Dam	Dropped	Served by
Princess	30	King Philip	Queen Anne	May 1st, '97	Uncle Sam
Date	Tested	Kindled	No. of Litter	No. Raised	Weaned Litter
July 4th, '98	July 7-8-11-13	Aug. 4th, '98	10	10	Sept. 18th.

FORM FOR A PEDIGREE.

It may be that you will have particularly choice stock with which you will wish to give a pedigree when sold, or when placed on exhibition. The following is an extended form of tabulated pedigree:

Bonanza Gold Leaf.. Bred by Elmer L. Platt, Bonanza Rabbitry, Los Angeles, Cal. Dropped Jan. 3d, 1898. Weight at 8 months, 10 $\frac{3}{4}$ lbs.	{ { { {	Bonanza Prince.....	Superior.....	{ Shakespeare
				{ Queen Anne
			Belle of Belgium	{ King of Belgium
				{ Pride of Belgium
	{ { { {	Gold Belle.....	Perfection	{ Lord Bacon
				{ Victoria
			Valley Belle.....	{ Diamond Chief
				{ Jewel of Belgium

BREEDING PRIZE WINNERS.

There are certain fundamental principles always to be borne in mind in mating hares so as to produce a progeny better than the parents, with the idea of improving one's strains or of securing exhibition specimens.

If you expect good results in this direction, you must never go at the breeding proposition haphazard, but must have a definite object in view and must aim to have the qualities of the sire and dam so blended that where the one is deficient the other may be able to supply that deficiency. A breeder should know what his hares are likely to transmit, for the hare hands down to his descend-

ants, both good and bad qualities with remarkably certainty.

For this purpose you must know the pedigrees of your hares and the qualities, desirable or otherwise, belonging to each family. The longer the good qualities have been bred into a family,

the more certain is any individual of that family to transmit them. Hence the value of pedigree, because a family that has long been noted for certain qualities is likely to continue noted for those same qualities.

The score card will be found of inestimable value in this direction, for it affords a ready means of comparing both the good qualities and the deficiencies of sires and dams. For instance, you have a doe that you desire to breed to produce better stock. Suppose that she is somewhat deficient in ticking. On no account should you mate her with a buck that is also deficient in ticking. Select one that has on over-supply, if anything. If your does is light in her hind feet, get a buck with as red hind feet as is possible for you to procure. And so on down through the list of the twenty-nine sections into which the score card, following the Standard of Excellence, is divided.

If you have originality enough to strike out for yourself and to follow an ideal of your own you may be fortunate enough to secure some very striking specimens that will make your reputation. It is possible, by judicious selection, keeping always the same end in view, to emphasize almost any quality. But you must be careful lest, in seeking for some one thing, you go too far and sacrifice that all-round excellence without which a high score is impossible.

Two things are always to be borne in mind, namely, form and color. These are the foundations of all the points in the Standard of Excellence. A good brood doe is always sound colored, that is, her fur everywhere is rich and strong, with plenty of life and fire in it. Never use a doe that has a gray or washed-out appearance. She should be of good size, long in body, but not heavily built. The legs of the doe should be especially fine and long. If the doe's legs are heavy and short, the young are certain to follow her in these respects. The same

fact applies in the symmetry of the back and loins. Color of the hind feet, ticking and lacing should be carefully considered. The hind feet should be of a deep red all around the leg and up to the hock joint. The ticking should be plentiful and wavy. The finer and leaner the head of the doe the better, and the eyes should be large and full.

The popular color for bucks at stud is a rich rufus-red, lightly ticked. This should run strong down the sides and haunches. The forelegs should be well colored and free from ticking and the hind legs as rich in color as it is possible to get. Never use a buck that has poor hind feet. Symmetry is a point of great importance in the buck. If he lacks grace and form his progeny will also be lacking. Heaviness or chopp'ness of the head is a feature especially liable to be transmitted and it is therefore especially desirable that the buck should be fine and clear-cut about the head.

In choosing foundation stock, you should be careful to select well-mated specimens along the lines here suggested. If you lack the experience or the opportunity to do this, then send to some reputable dealer, state your needs fully to him and have him make a selection for you. The foundation stock will be hereafter of greater and greater importance in this country, for the time has gone by for taking poor stock and trying to upbuild a better strain by long and tedious experiments. There is too much good stock in the country now, and the man who attempts to establish a rabbitry by this means will starve to death while his more enterprising competitors are covering the field. Therefore make sure that the stock with which you commence is the very best procurable.

The greatest source of pleasure and profit, next to possession of fine specimens, lies in the success achieved through one's efforts to produce specimens superior to those already possessed. The fascination of this pursuit is best illus-

trated by the earnestness and the lavish outlay of money and time expended by fanciers on all classes of domestic live stock throughout the world, from the tiny canary to the ponderous draft horse. This is the art that is least considered, least studied and least practiced by the fanciers of the Belgian hare in this country. Yet it is one in which all take an intense interest when once they have gathered a knowledge of the fundamental principles underlying the art of scientific mating to produce specimens approaching the ideal of perfection.

It is a fact that "like begets like," or like some ancestor, and this likeness to some ancestor may be carried back to the third and fourth, and even the fifth and sixth, generation. This is a point that is little understood and little attention is paid to it, and it is here that we find the greatest value in the lineage as recorded by the system of pedigreeing and registering animals.

This system of recording should define many of the qualities of the foundation stock that one employs upon which to build a herd of ideal specimens. The score card fills this want to a great extent, though, perhaps, a more extended record of their qualities than is mentioned in the score card would be of great assistance. This might be defined by measurements of the various sections establishing an ideal that could be explained in a figure chart and could be communicated on paper.

Before one can achieve practical results he must have established in his mind's eye the ideal that he is aiming to produce, and, with this established, he can aim with some degree of certainty of hitting the mark. Now, we are prepared to discuss the various qualities of the specimens before us. First we will start out with specimens that are rated today as possessing qualities equal to 90 or 91 points. These we will define as our does for the foundation stock. Now, if you mate these does with a buck who will score no

more, but just about the same, and save the females from each succeeding generation and mate them with a buck that, though not akin, is of only equal rating and quality, you can proceed in this course without any reference to selecting the best from the produce of these matings for years and years, and you will probably fetch up at the end of a quarter century with stock of just about the same quality, and a good many will go down the scale. Only a very few will ascend the ladder, but the majority will remain in just the same scale of quality, and there will be little or no difference—at least not enough to make any material difference in the cash value of the stock.

But take these 91 point does and a buck who is already up in the standard $93\frac{1}{2}$ or $94\frac{1}{2}$ points, and by selecting the best females from this mating and breeding them to another buck not akin and of same quality as their sire, you may produce a vast improvement in two generations. Then the best does selected from this last mating and mated with a buck scoring 95 points would enable us to ascend the ladder. Again, mating the does from the last mating to a buck of equal quality to their sire would establish in their progeny the qualities of their sire and grandsire to a great certainty, at least the majority would be of the high-type specimens. Now, by selecting the best of these does and mating with a buck superior, we again ascend the ladder towards perfection.

Now, to keep up this point, it is only by selection, or the art of choosing both males and females that possess the greatest number of all-round good points that we can maintain our ground. Unless we do this retrogression is likely to follow. The progeny of a doe will never be superior to the dam unless they are sired by a buck that is superior to the dam. He is worth as much as all the does that he can mate with, say twenty to twenty-five.



BLOOMING HEATHER.

Imported by Bonanza Rabbitry, December 3rd, 1899; age 1 year, weight 8 lbs. Half-brother to our great Champion Fashoda, sire Champion Edinboro, dam by Champion Malton Mystery.

The best buck in the world is worth this much if he cannot be had for less. The only point is to be sure that he is the best and then get him at any price. This is the logical course for the true and scientific fancier to pursue. Now, for individual specimens, take a doe that scores 94 points and say that she is cut $1\frac{1}{4}$ points on ear-lacing. Had she escaped this cut she would have made a score of $95\frac{1}{4}$, which is an exceptionally high mark. Suppose that she is cut one-half on shape of front leg, which might have been saved, then she would have reached the score of $95\frac{1}{4}$. Supposing, again, that she were cut one-half for lack of color on sides and could have saved this, and this would have made $96\frac{1}{4}$. Now with a cut of one-half for hindquarters, if saved, it would have made $96\frac{1}{4}$ points. Now, these are points that can be overcome to a great extent by selection of the buck to mate with these does. In the first place find a buck with fine length of body and limb and whose markings are as good as those of the doe, or nearly so, and who scores as much as she, but, in addition has perfect ear lacing, if it is possible to find him, or one that will come as near as possible to perfection in this respect—say with a cut of not more than one-fourth. From this mating we are likely to get a few of the youngsters who will be as good as their sire and perhaps one or two whose ears will be absolutely perfect. Now mate the females from this mating with another buck, who will establish the perfection of lacing in the next generation, being guarded to improve upon other qualities, such as shape of front foot, color of sides, etc., if possible. That is, gain on as many points as possible in each mating, for a certainty on one and that the one which is the weakest. In this way we ascend the ladder through each succeeding generation as high as it is possible to go, bearing in mind the importance of overcoming the greatest weakness possessed by the does with

each mating. This theory applies to all other sections, as well as those enumerated.

To enable one to arrive at a correct understanding of the style and quality of the ideal specimen of the Belgian hare it is necessary that he first learn the requirements as defined by the American Standard of Excellence for Belgian hares and thoroughly familiarize himself with this, which may be accomplished by a general acquaintance with the score card system of defining the Standard of Excellence.

It is not to be presumed that one can, from the study of this Standard of Excellence and score card, acquire a technical knowledge or delineation of the twenty-nine sections of the hare as explained by this.

There is a necessity for a course of instruction furnished by a competent instructor in person. The various shades of color and shape of the twenty-nine sections of the hare necessitates an ocular and personal description to be able to impart skill in judging the hare. However, sufficient information can be gained from the Standard of Excellence and score card to enable one to accomplish a great deal in the way of selection for mating to breed up toward the ideal type.

On analysis of the Standard of Excellence which may be found in the score card, we find four important features, namely: size, shape, color, and quality. The Standard defines eight pounds as a reasonable weight and one which it is easy to obtain. This should be our starting point.

For a lack of weight a punishment is given the specimen. For an excessive weight there is no punishment so far as weight goes. The point to be borne in mind in connection with large specimens is "quality."

Could we have a specimen that would weigh ten pounds with quality equal to an eight-pound specimen certainly the ten-pound animal would be the

better. The old axoim, "size, quality being equal, is the measure of power" holds good with the hare, not in a physical sense but in a monetary one. Without a doubt the day is not far distant when the fancier will value a ten-pound specimen scoring 96 points at least double that of an eight-pound specimen making the same score. The nice, tiny thing is a pleasure but the magnificent large specimen of animated life affords greater pleasure and greater profit to its owner. Therefore, never sacrifice size, at least to lower the standard weight, in your selection for either young stock or to produce finer types.

True it is that the fine large specimen is a rarity but from the few in existence it is possible to secure a starter from which to produce.

Next we will refer to shape. An eight-pound hare moulded after the shape of a lump of putty would have no attraction whatever though he might be just as good eating and his pelt might make just as good a cap, cape, or muff. Nevertheless a harmony of one section to another, which we term symmetry and which is found in the ideal, the English wild hare, invites the admiration of all lovers of grace of movement in animals.

By studying the Standard of Excellence the ideal as to shape may be fixed in the mind's eye and the values of the various portions as defined by the score card give to one the key to this situation. In selection for mating, compare the doe with the idea which you may, by persistent study, decide in your mind to be the ideal. If your doe be short of coupling, short of limb, and round and chubby in body, instead of long and thin, if she has heavy and deep jaws instead of being narrow in the head, never mate her to a buck possessing these same undesirable qualities to the same degree that the doe possesses them. In these points the buck should be as much superior to the doe

as is possible to get, so that you may improve upon her in her progeny. Then, by the selection of the best does from this mating and breeding them to a buck still superior to them in these particular sections, each succeeding generation will be an improvement upon the foundation stock and be a nearer approach to the ideal.

This applies to the other sections as the course that should be pursued to enable one to breed up toward the ideal.

Again, taking up color. The Standard of Excellence calls for the rich, rufus-red. If the doe possesses little of the rufus-red, which will be shown most distinctly on the back of the neck, then this lack of richness will be more or less manifested in other sections of the body, and in lieu of the red there will be a tendency to smoky under-color when the hair is blown open along the back and upper sides. The nearest possible to a light, or delicate blue, tint of color on the hair next to the skin is usually found with the richest of specimens. In an instance where the rich rufus-red is lacking, instead of this delicate tinted blue is found a dark, smoky color especially on the hind-quarters and often on the sides nearest to the white line defining sides and belly.

To improve upon the weakness in this particular, use for a buck to mate with the doe one possessing the lightest of tints next to the skin on the hind-quarters and sides and also the nearest to the rich, rufus-red on the back of the neck and throughout the body that is possible to get. Often this darkest under-color on the top of the body is associated with a superabundance of ticking, and vice versa, the reddest of animals rarely possess sufficient ticking. Here is a field for the student and an opportunity for one to use his skill in producing ideal types, as defined by the Standard of Excellence. From this mat-

ing there will be an improvement over the doe and sometimes a beautiful specimen will crop out in the first mating where the buck is of the high-type class though the doe may be only passably good, but succeeding matings will be required to establish the prepotency of a specimen. This same rule applies to color in other sections, the golden-tan of the ear, the beautiful band of black ear lacing, on the edge of the ear, and the strictly rich, rufus-red front and hind feet, front feet and legs free from ticking, hind feet free from smudge on the outer lower side and from white on the upper inner side. The hind foot is that portion which rests upon the ground and is about five or six inches long.

Now the last section is quality. Short, stubby front legs are usually found with very coarse bones, short, blocky or choppy bodied specimens, broad heads, heavy, deep jaw-bones, thick ears, thick, loose skin, flabby or soft flesh go in under the head of coarseness. A doe having these defects may be mated to the longest bodied, best rounded arch and smoothest hindquarters and small boned front leg, satin-like coat of hair, thin and firmly set ears, firm-fleshed buck possible to obtain and a vast improvement will be made in the progeny of the first mating. Again, saving the best of the females from this mating and breeding these up to another buck of the high-type class there will be a very great advancement.

In these selections for mating, combine all these qualities in the buck, size, shape, color and quality and when these are also combined in the doe then you may look for a uniform product, that is, each and every one of the litter will be as good as or better than, their sire and dam.

This is the short cut way to producing the ideal or the exhibition type of hare when supply is procurable. One unacquainted with the technical know-

ledge of the Standard of Excellence and score card can best serve his purpose in this direction by either employing an expert breeder and judge to choose for him his foundation stock, buck or does best suited to mate with the possible stock, one or the other of which he may have, or order his does bred with such a purpose in view, or order his specimens so that they shall be adapted to this purpose.

REGISTRATION.

A system of registration for Belgian hares is as imperative as is method in any business. The merchant without his system of books would be unable to determine at any time whether or not he was progressing or losing money in his business. A part of the system of books is an inventory or invoice department. By the various departments of his system he may, at any time, locate his property in his store, and this while right at his desk without a promiscuous, wild-goose chase over his store or shop for this or that and the other class of goods.

Shipping merchants the world over are obliged to register their craft, and, without this system of registration, confusion in commerce on the seas would reign and the tangle could never be unravelled.

And again, the railroad interests and the street-car companies are unable to transact business without a system of registration of some kind. With them names or numbers are employed to designate their locomotives or cars. Without a system of registrations and certificates of title our landholdings would be not only valueless but a source of eternal contention.

The same reasoning applies to the human family. Without a system of registration of births and deaths and without names and without the Great Register for regulation in voting where would the world be? To transact bus-

iness would be simply impossible and we would be on a level with the wild beasts, cattle and horses of the mountains and plains.

The registration of live stock implies painstaking methods in the selection of the breeding animals, and without a system on registration the up-building of a breed of live stock will never result. Instances furnishing evidence to substantiate this view occasionally occur in every community. Occasionally a herd of Short-horns, Jerseys, Holsteins, or blooded horses are for sale, but, for some unaccountable reason, the registration papers are lacking. The result is invariably that this stock brings, at either a private sale or public auction, only 1-4 and sometimes 1-8 as much as it would have brought had the registration been kept complete and progressive breeders almost invariably regret this.

Though an animal be ever so high in individual excellence, yet if he cannot be identified with a strain of blood which has gained notoriety on the field of contest for speed or in the exhibition arena of the fat-stock show or the Dairymen's Association, it possesses but little more value than its wild companion roaming the ranges. A Jersey cow would never bring \$500, though she gave forty-eight pounds of milk a day and made four pounds of butter a day, unless it could be established by her pedigree and this substantiated by the register that she was a thoroughbred and had descended from a family noted for great performances in the dairy.

History, with domestic live stock is a parallel illustration with the record of the genealogy of the human family, and with domestic live stock this history is the herd register.

Registration is the custom and has from the beginning of civilization, been the custom. It simply remains for those interested in any branch of business to adopt a system or recording the identity of their property or to proceed along a hit-or-miss, go-as-you-please style.

With the Belgian-hare fancier, only a moment's thought is necessary to convince him of the importance of a system of registration for hares. A retrospective view of the industry in any neighborhood dating back over a period of only six months or a year reveals confusion nigh unto that of the Tower of Babel. And here is an illustration of this.

Smith buys a buck from Denver parties, this buck being sired by Champion Yukon. This sire having become famous, Jones who lives a short distance from Denver, realizes that popularity helps a man sell stock, so he christens an old-time, American-bred doe, possessing little or no merit, as Madam Yukon. Neighbor Smith inquires of Jones, the owner of Madam Yukon, for prices. The prices quoted by Jones are about three-fourths as high as those quoted by the owner of the original and and genuine Yukon. Smith believes that he is getting Yukon blood and at three-fourths the price quoted by the genuine Yukon owner so he makes a purchase of Jones and both Smith and Jones advertise their bucks as of the Yukon strain.

Smith No. 2., in another part of the town, finds that Smith No. 1 has a fine buck named "Smith's Yukon." He cannot see any difference between one Smith and another Smith, so he, too, christens a buck "Smith's Yukon." Then we will find this chain of circumstances and conditions repeated all along the line. One party chooses a name and advertises a buck out of Mayflower, and right away, within a few days, another party will spring an advertisement and claim to have a litter for sale from Mayflower, and the using of these names has been repeated as many as six or eight times within a radius of two or three hundred miles from a given center.

Another instance: A has a doe that has proven to be a remarkably good breeder. He names her and she gains a reputation for producing fine specimens,

especially bucks. As soon as this becomes known B will christen a doe by the same name that A's doe bears, and, in consequence, the amateurs are misled and one twenty miles in one direction, buys a buck from one of these does and believes that he is getting something grand, having learned a little something about the famous breeding doe owned by A. Later on he learns that he has been misled and that he is injured, B who succeeds in establishing quite a demand for his youngsters, all upon the strength of the reputation gained by A for his crack doe, finds the demand in excess of the supply, and his seven bucks in the litter is extended up to twelve and thirteen and he has at the same time something like eight or ten does left in the same litter.

Registration and affidavits of pedigree would obviate this at least to a great extent. True it is that occasionally a man will be found who will take his oath before God and man, and perjure himself by so doing, but such men are few and far between. Properly managed registration would require sworn affidavits and the application sets forth exact dates of birth, and by whom specimen was bred, and by whom the sire and dam for generations back were bred, and the date of birth for these same ancestors. It would also require the report of sales and time and to whom sold, and in this way, and this way alone, can anything like an honoralbe system of dealing and the avoidance of confusion be forced upon the majority of hare breeders.

A complete system with rigid requirements from breeders is the only safeguard against imposition, downright fraud, and deterioration of the stock. Registration, artfully designed, accurately compiled, and religiously enforced, affords an unerring guide to the progressive breeder.

Without such registration it is next to impossible to breed for any great

length of time without inbreeding, for the very reason that, though representations are made that the specimen is just what is inquired for, and is not akin to the strains of blood already possessed by the would-be purchaser, yet, if there is no recorded evidence of the pedigree of the specimen in question, the seller may, if he chooses, and this is too often done, furnish the inquirer with a specimen close akin to those he has and thereby work great injury. But when a breeder is possessed of a copy of the register, which should be issued as often as every six months, one may sit in his rabbitry and make selections of the blood line he desires and therein find the name and address of the breeder of the particular strain of blood or the animal that he is looking for and then, in addition to registration, a record would be given of the prize winnings of progenitors of the animal in question, together with the score of the same, so that one might feel nearly as certain of what he is getting as it is possible to be without seeing it, equally as certain as one who deals with a reputable dry goods house that sells goods by catalogue and maintains a continued patronage by fair dealing.

Without a system of registration the mail order method of buying and selling would soon cease. In fact it has already nearly ceased in other districts where the industry has existed for about a year and the only explanation for its having lasted so long was the fact that breeding stock was so scarce and the intense interest awakened prompted people to take chances. But so soon as they learn what a really good specimen of Belgian hare is they at once become dissatisfied with the majority of stock in their possession which was represented to be "all that could be desired" and "the best obtainable," etc., etc.

But the fact that the progeny develop disqualifying marks and other features

OFFICIAL SCORE CARD OF THE

American Breeders of Belgian Hares

(INCORPORATED)

Adapted to the American Standard of Excellence for Heavyweight Belgian Hares.

OWNER'S NAME.....

ADDRESS.....

Specimen's

Date of birth..... No.....

Name..... Weight.

Los Angeles, Cal.....190...

CLASS.....		SIZE	SHAPE	COLOR	QUALITY
COLOR 42	Ticking.....	*	*		*
	Back.....	*	*		*
	Sides.....	*	*		*
	Hind quarters.....	*	*		*
	Jaws.....	*	*		*
	Lacing.....	*	*		*
	Ears.....	*	*		*
	Eyes.....	*	*		*
	Shoulders.....	*	*		*
	Belly.....	*	*		*
	Front Legs and Feet.....	*	*		*
	Hind Legs and Feet.....	*	*		*
SIZE 20	Length of Vertebrae.....		*	*	*
	Length of Front Legs.....		*	*	*
	Length of Hind Legs.....		*	*	*
	Length of Ears.....		*	*	*
	Size of Eyes.....		*	*	*
	Weight of Specimen.....		*	*	*
SHAPE 24	Head.....	*		*	*
	Breast.....	*		*	*
	Front Legs and Feet.....	*		*	*
	Ears.....	*		*	*
	Eyes.....	*		*	*
	Body.....	*		*	*
Condition 8	Flesh.....	*	*	*	
	Fur.....	*	*	*	
Quality 6	Fur.....	*	*	*	
	Skin.....	*	*	*	
Sum of Columns.....					

Possible Score, 100.

Total Outs.....

Score.....Points.

Judge.....

.....President. P. O.....

.....Secretary. Strte.....

that show they descended from grade instead of the genuine thoroughbred stock, at once dampens the ardor of the recruit to the industry and prompts him to ask "How can this fraud be avoided?" But in the Belgian hare industry as in everything else the survival of the fittest will eventually obtain. Necessity is the mother of invention and the necessity for registration is at hand. And the life, pleasure and profit of the industry, depends wholly upon registration and legitimate scoring and judging the other. These two features, skillfully employed, are really the crowning wreathes to all the efforts heretofore put forth to develop and establish this noble little animal in the heart of the American fancier.

The haphazard, slipshod, unsystematic and non-reliable ways practiced throughout the American continent cannot exist longer in this industry. The National Association of Belgian Hare Judges has taken up this matter of registration together with honorable judging and they will spare neither pains, energy, nor money to establish these two the most important phases connected with the fancy, in the highest degree possible to attain.

The registration books will be in the form of a series. The first book will be for the registration of record-makers, those who have won laurels in the exhibition rooms in any part of the world. The second book will be for general registration, or for what may be termed breeding stock, the same being eligible to registration in book No. 1 whenever they have won on the exhibition table. Book No. 3 may be termed the junior series. This will admit of registration of young hares that are the get of record makers at an age too young to score and to meet the requirements for Book No. 2, which is for general registration. Fifty per cent of the fee required for Books No. 1 and 2 will be charged for registration in Book No. 3. Book No. 4 is the advance registra-

tion intended for the recording of names, and the charge for this will be 50 cents, and the record of the name holds good for one year. At any time the animal is eligible to registration in Books No. 1, 2 and 3, and may be recorded under this name, and one name shall be used only by one party. Application blanks will be furnished gratis. Same must be filled out in full and affidavit made before a notary public, this to be accompanied by a pedigree of the specimen, when a certificate of registration, numbered, will be furnished the applicant, providing the application is accepted by the Board of Registration.

As often as once a month the full list of specimens recorded will be published in a leading journal devoted to the fancy. The full address of the owner will appear, together with the name and number of the sire and dam of the specimen. A complete record of all animals registered will be published in one volume every six months and same will be on sale. The headquarters for the association will be 930 Grand View av., Los Angeles, where all information upon this work may be had for 10 cents in stamps.

SCIENTIFIC PREPARATION OF HARES FOR EXHIBITION.

Dressing the hare for exhibition may be likened to dressing a child for having its picture taken. In either case the subject in the hands of an artist can be made a veritable fairy. Following scientific mating comes the task equally as necessary in order to achieve the highest results in the exhibition rooms.

Commencing at the same point, that upon which rests the foundation for success in breeding exhibition specimens, which is, the ideal specimen always in his mind's eye, the fancier may here indulge his imagination, in fact, he must exercise his imagination, and upon the extent of his capacity in this direction will depend his success in producing

types approaching the nearest to perfection.

Having weaned the youngsters great care must be taken not to distend their stomachs by over-feeding and especially over-feeding with bulky foods. Of all the forage plants most likely to produce distended stomach, or paunch, is alfalfa and clover hay in any form, from the green grass to the cured hay. A large proportion of the food regularly furnished should consist of the grains and these in the concentrated forms are best. Any kind of hay food in unlimited quantities tends to distend the stomach and thereby destroy the shape, or prevent the development of that nice, round body with well sprung ribs and a circumference at the flank and over the loins of equal size to the circumference of the body back of the forelegs and over heart and lungs.

The properly fed specimen from six to eight weeks of age until he reaches say seven to eight months of age will have a body of equal size at these two points and much like that of a weasel or ferret. This is the ideal style of body in the high-type Belgian hare and it is easily obtained by pursuing the following course: The proper course is first, to select those foods best suited to the nature of the hare. First, then, the hare enjoys fibre. The coarser and drier of the succulent growths of the vegetable kingdom the old bark of mature and thrifty trees especially, birch, apple, pear, peach, plum, and the grape vine are the best. These are his relish and are to him what pie is to the boy and if he has this in abundance he will nearly, or quite, subsist, upon them. But the next best substitute is the well-cured wheat, oat and barley straw. These carry only a trifle of moisture and consequently a greater per cent. of the rich food elements requisite to the growth of the entire organism of the hare.

Hares in confinement enjoy these fibrous foods equally as much as they do

the soft and green foods. In fact, the coarse, dry, fibrous food is indispensable to their health as well as to their satisfaction and comfort. The hare is a ruminating animal. The soft, green grasses are a washy food and furnish but little or no fiber, and the hare is scarcely able to make his cud from this class of food, and when confined to this alone, he will eat the wood of his cages and does this out of clear necessity to procure the proper balance of ration natural to him.

Consequently three-fourths of the forage given to a hare should consist of fibrous food and in the form of straw or barks, twigs from the fruit trees or coarse shrubbery. Of this the hare will rarely ever eat in sufficient quantities to distort the beautiful, symmetrical style of body natural to him. However, it is well to feed only what the hare will eat up clean within a few minutes after being fed. The young hares should receive several feeds each day—as many as six or eight, lessening the number as the hare advances in age to about four months—an earlier morning feed, then late in the forenoon, again late in the afternoon, and then a late evening bite. The hare is a night-prowling animal and a great portion of the time devoted to activity is during the night. This is the time he really requires his greatest supply of food.

Of the grains oats is superior to all others. They contain the nerve and nitrogenous elements which furnish spirit, strength and endurance in greater proportion than that furnished by any other grain. It is questionable whether the rolled or hulled oats are preferable to the oat in its natural state as it comes from the thresher. One thing is certain, the hare enjoys the rolled oats best. He eats greater quantities and seems to delight in having little or nothing to do in preparing them, or else they are sweeter to the taste, though others will eat the whole, oats and still others will shell the oat, leaving the

shucks and eating only the berry. Unquestionably the rolled or hulled oats furnish the food elements in the most concentrated form and therefore must be considered, at least for feeding exhibition specimens, preferable to the entire kernel, unhulled. By furnishing the necessary amount of nutriment to sustain life and promote growth in a highly concentrated form, we are certainly less likely to develop the large state of intestines and stomach, thereby keeping the uniformly round shape with well tucked up flank.

Of all the liquids, undoubtedly milk is preferable. Porridges made from the grains stand second. These are best because they possess food elements in connection with the liquid necessary; consequently only a small quantity should be allowed at one time.

The hare enjoys as relishes corn husks, green sweet corn, string beans, and green pease, and tid-bits of these should be given him frequently—at least three or four times a week.

Now, having selected and adopted a proper course of feeding our hare, the next is to give him exercise, or, in other words, to train him. Give him facilities for developing a lithe and symmetrical conformation. By this I mean length of limb, length of body and strength of limb, especially front feet and legs, that he may stand erect and on tiptoe, overcoming the tendency to a bear-shaped front foot. The circular pen described on page 45 affords the opportunity for training, placing hurdles, or flights of stairs, at intervals in the circle, and the hare will bound over, raising them as he learns to scale them easily, until he is able to leap four or even five feet readily. This exercise, or training, produces an appetite, an ambition and a spirit which with the advancement of time develops into a fad with the hare. He actually looks forward to his hour of training as does the boy to his game of football or a spin on his wheel.

Another important feature in the preparation of exhibition specimens is the frequent handling of them to accustom them to being taken up, posed, or positioned, and to take these positions and pose, to show them off to the best advantage. The hare may be trained in several different and very taking attitudes.

The stretched pose which is represented by Champion Fashoda in this volume may be termed the English pose. Doubtless this is the Englishman's favorite pose for the hare. All popular exhibition specimens coming from England assume this pose when placed upon the table, and the inference is that they are trained to it. The upright pose of Fashoda represented in this volume was taught him within a period of about ten days, with two or three lessons each day. The pose of Ruby Prince, represented in this volume, is another that illustrates the susceptibility of the hare to training. The pose of Young Fashoda, represented in this volume, is still another style of pose. There are, in addition to these poses mentioned, the ones of Blooming Heather and Beauty's Noble, representing the hare to be posed resting upon his forelegs and arms and holding the body off the table one and one-half to two inches, and are very pretty and taking attitudes. These are poses that are the results of ideas originated at the Bonanza Rabbitry. Hares that are allowed to run with little or no handling until just before time to take them to the fair rarely ever show off to a good advantage. Under the excitement and appearance of the crowds of people and the commotion present at such places the hares will appear contracted and even to suppress respiration to such an extent that they take positions almost distorted in shape of head, neck, back and limbs, and when touched by the judge they draw right up into a lump shape and will either lay their ears on their

backs or drop one ear, swell out their eyes and rest their heads on the table, or on their forefeet, making a squatty shape. But, if well trained, the hare will assume attitudes of grace and show off in a spirited and intelligent manner which adds immeasurably to his chances for success in the battle of competition.

To bring about all these conditions is very easy. The stroking and grooming of the hare during his fitting process of course does a great deal towards accustoming him to being handled, but in addition to this, he should be trained to pose in the attitudes chosen or considered best suited to his make-up. In this training process never get out of patience. No matter how obstinate the specimen may be, keep up your efforts to place him in the position chosen until he ceases to move from it, for as long as one or two seconds. As soon as he is obedient to this extent, step back, hands off, and give him a rest, which is compensation for having done something. He will soon learn that this is what you want of him. Continue this process until the hare will assume the desired position and retain it for at least five seconds. It is possible to train him to hold this position for one, two, and even three minutes.

The hare trained to pose beautifully and do it readily is a very fascinating creature and invariably elicits commendation from all lookers-on, and is one of the features of the fancy which is of inestimable value in aiding to popularize this noble little animal.

The hare is a highly sensitive animal, extremely active and easily excited; therefore, it is necessary to employ moderation in all movements about him while he is undergoing the training process. After he is well advanced in his training lessons care in this respect will not be as necessary. Never grab the hare up roughly and swing him

around in the air with a one-hand hold. Always, if possible, take him up with both hands, head toward you, pressing the arms against the body with hands clasping the hips, and be moderate. Do not grab him until he is settled down, if it be necessary to corner him, and stroke him even before lifting him. If handled from a young age the hare will, within a few weeks, learn to come to the door of his pen whenever it is opened.

Little tid-bits offered him does much to win his attention and affection. It is always best when training to move the hare about to different places, from the pen to the barn and from the barn to the house, and accustom him to changes, even putting him in a box and allowing him to remain for one or two hours at a time. Move the box from place to place and sometimes change boxes and let him smell and investigate different quarters in the rabbitry. Really, if you are fitting a specimen that you intend to hippodrome from point to point for exhibition purposes, it is an excellent plan to place the hare in a box and take him out driving, stopping at a friend's house long enough to take the hare out and place him on the table for a while. Accustom him to being moved about and appearing in strange places.

The hare, by nature, is a night-prowling animal and feels best at sunrise and sunset. Never give him his training lessons at midday. Early morning and evening is the best time. Really, a hare should be protected from the light for a good portion of the day, giving him well-ventilated but darkened quarters. This is the time when he rests, possibly sleeps. If possible, always avoid handling the hare much in midday during hot weather. He is most especially sensitive to heat, being a fur-bearing animal. The cooler hours of the day, the cooler months of the year, and the cooler portions of the country are

best suited to his nature. The most pointed and concise instruction possible to give in handling the hare is—persist in studying his nature, and in all your movements about him and your ideas of him be governed by the understanding obtained from this study of his nature.

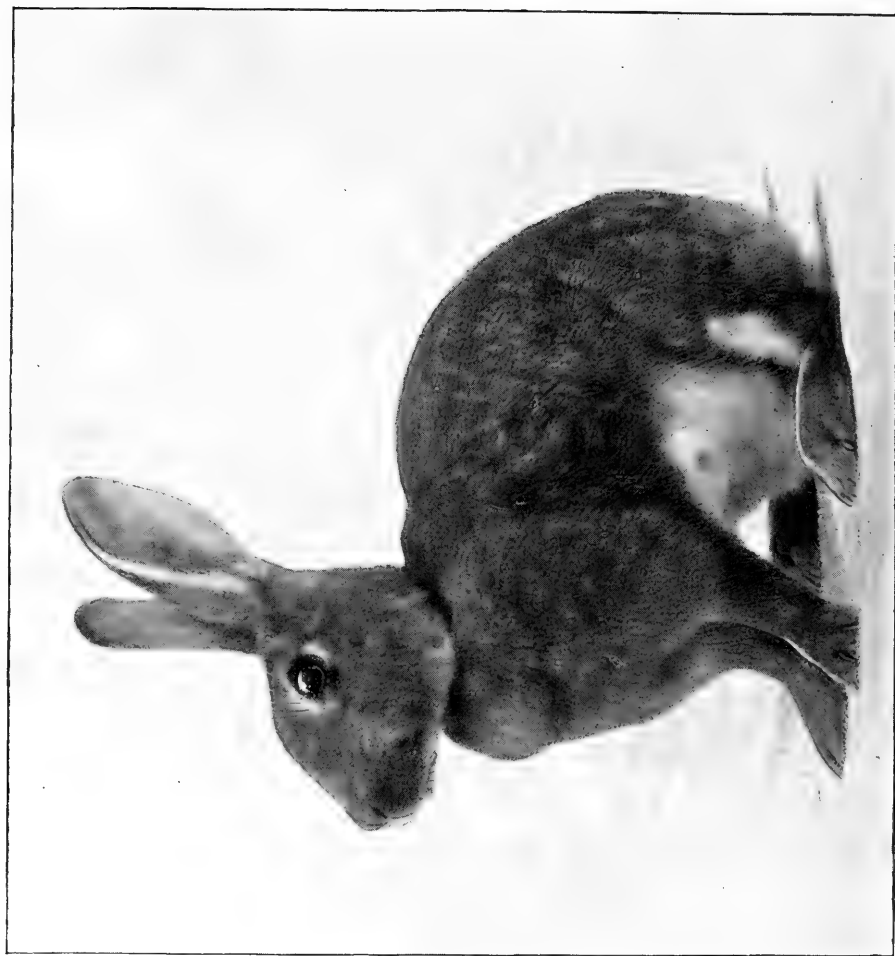
Hares well trained and nicely handled never jump and bound and scratch with frenzy or make any efforts to get away, even to jump from the table. They may be trained to lounge on the table for hours at a time without making any effort to leave it. But hares unaccustomed to being handled, more especially the old-type of hare, will almost invariably when taken up by the shoulders, or in any way, make a vigorous stroke with the hind feet, often cutting the skin through and repeat this about every time they are taken hold of.

For the judge to handle such specimens on the exhibition table necessitates the wearing of gloves and wristers or being very dexterous in letting go of the hare just in time to avoid the stroke of the hind feet and it is often necessary that he make repeated attempts, perhaps a dozen, to raise the hare in a way that will enable him to examine the different sections before passing an opinion upon them. This practically means that he must educate the hare, something that should be done before he is brought to the exhibition.

The hare delights in his early morning frolic. This is the time of all the hours of the day when he should have the opportunity to circle his race-course, climb his stairs or jump through his hoop. There is a great difference in hares as to their disposition to take exercise, but usually, by placing two side by side with a wire netting partition they will travel in a circle and the most indolent of them will soon learn to enjoy his race-course exercise. Others are by nature so spirited and restless that they travel incessantly during all the daylight and are by far more

vigorous in this direction in the night time. It is this class of hares that we develop to the highest degree of style and shape and teach to perform tricks. The sluggish hare may be fitted and placed in very good condition by the grooming process, placing the hare on the table with the head from you, putting friction on the body with each hand back and forth on each side and ruffling the coat up and bearing on quite firmly from the haunches to the shoulders, changing about and holding the hare with one hand and pressing on one side one hand while rubbing up and down and back and forth on the other side with the other hand. Then give him the smoothing down process, stroking the coat smoothly into place with steady, firm strokes. The hare will soon learn to brace against this rubbing, making his limbs, in fact, every cord and muscle in his body, rigid. This will in time give his flesh the appearance of a race horse and, of course, the coat will improve correspondingly. Ten minutes grooming each day will effect a wonderful change in the condition of the hare within twenty or thirty days' time, though a young hare intended for exhibition purposes should have this training moderately from the time he is three months of age until he is matured and as long as kept for exhibition purposes. The hare will soon learn to enjoy this. The hare that will take a great deal of exercise in his circular run really requires but little grooming though some is necessary. Another way that will suffice to place a doe for exhibition in pretty good trim is to allow her a chance to burrow.

This they will begin about four to five months of age and as fast as they have made one burrow and seem contented with it change them into another pen or break their hole and fill it up with dirt. But usually the better plan is to change them into another pen when they will repeat the process of burrowing and work like Trojans.



BONANZA BEAUTY.—At 2 Years.

Sired by imported Champion Yukon; dam Princess. This doe has produced stock that has sold, or could have been sold, for a valuation of over \$4000.00. Property of Bonanza Rabbitry, Los Angeles, Cal.

This gives them a good appetite, hardens up their muscle and, together with the table grooming, puts them in thorough condition.

BREEDERS' ASSOCIATIONS.

Clubs of persons interested in the breeding and rearing of Belgian hares are now being formed all over the country. Some are simple associations; others are incorporations. The great advantages of these associations will be obvious to every thinking person. They promote public interest in the subject by holding fairs and exhibitions. The exposition of February, 1900, at Los Angeles, was a conspicuous example of what may be done in this direction. It was given under the direction of the American Breeders of Belgian Hares, an incorporation composed of leading breeders of Southern California. About 1,100 hares were on exhibition. The prizes offered and given aggregated thousands of dollars. The show was attended by nearly five thousand visitors and the interest aroused gave an impetus to the Belgian hare industry in California that will never be lost. An important feature was a class in scoring conducted by P. E. Crabtree, of Denver, the official judge of the exposition. The members of this class received a thorough course of instruction in the art of scoring and are now fully qualified not only to place a reliable estimate upon the merits of their own stock—for all of them are breeders—but also to act as instructors at other institutes and to score the hares in other rabbitries than their own. Undoubtedly, in the course of a few years, exhibitions of Belgian hares will be held all over the United States, every year, upon the English plan, but with this important difference, that the industry in this country will assume proportions many times greater than it has ever held in Great Britain.

Breeders' associations should estab-

lish herd books and registers with a most rigid standard of excellence uniformly enforced. This is the only way to improve the various strains and to place the industry, from the fanciers' standpoint, upon a permanent basis. The Pacific Coast is especially favored as regards its opportunities in this industry. With the favorable climatic conditions existing here, and the great variety and abundance of foods suitable to the hare, available throughout the year, at a very slight expense as compared with the cost in less favored localities, we are developing a type of hare that will lead the world.

Other varieties of live stock have been improved, step by step, through associations of breeders. Thus the American Jersey Cattle Club made a foundation for their pedigrees in stock imported direct from the island of Jersey, and adhered rigidly to a high standard, finally bringing the Jersey to a state of perfection formerly unknown even in its own home. The Shorthorn, the Hereford, the Polled Angus, and the Galloway, as now bred in America, are far in the lead of the original herds imported from Europe. The same is true of the milk-producing qualities of the Holstein, which have been made popular by a most liberal use of money since their advent upon our shores from Holland. The milk and butter producing qualities of the Jersey, as well as her very great improvement in size, are still more noted examples. These advances, of incalculable value, have been accomplished through the enterprise of American breeders, who have spared no pains, and have made a most liberal use of money. The object in improving the Belgian hare is to secure the greatest quantity of toothsome meat at the least possible expense, and in the shortest possible time. The conditions are such that, with intelligent, united and well-directed effort this result ought to be attained more quickly on the Pacific Coast than anywhere else in the world.

ADVANTAGES OF PUBLIC EXHIBITIONS.

The present high order of civilization owes a great deal to the object lesson gained at fairs. Without a doubt, equally as much benefit to the world at large has resulted from the minor fairs, the county fairs, State fairs and school and church fairs, and also poultry and pet stock exhibitions as has resulted from the world-famed exhibitions. Fairs are an object lesson and serve to educate as no other method of describing, points in animals can possibly do. In reality there is no way to ascertain to what degree of perfection it is possible to attain in the breeding of hares than for breeders to meet in friendly competition. The opportunities granted at fairs to make comparisons, take notes on the contrasts of the various points of quality cannot be gained by individual effort at one hundred times the cost attendant on making an exhibit at a well managed exposition, either of hares or any other branch of live stock or of any article of commerce. The stimulus gained at fairs carries the witnesses on for a year and, in fact, for years. Fairs awaken a sentiment of rivalry and a spirit of enterprise which are possessed by every person engaged in any of the lines of commerce. These are the key notes to progress and the disposition to rivalry prompts the outlay of money and vigorous effort from the most insignificant feature of a home up to the conducting of gigantic corporations, including the racing of railroad trains across the continent and the means of rapid or instantaneous communication such as the telephone and telegraph.

Well managed and liberally patronized Belgian hare exhibitions are an imperative necessity to the development and permanency of the Belgian hare industry. None interested in the hare can, consistently with his best interests, withhold liberal donations of money, or at least his personal appearance and patronage

to the Belgian Hare fair. It is an imperative duty devolving upon everyone interested in this industry to assist in popularizing this little animal.

In fact, the situation is this, that he who withholds support and patronage is soon lost to sight in the realm of the fancy and, therefore, he is compelled to do one thing or the other; contribute to the maintenance and upbuilding of the industry or lose his identity with the fancy.

ORGANIZING AND CONDUCTING EXPOSITIONS.

Our observation and experience have convinced us that a close incorporation or association of a few individuals, perhaps a dozen or fifteen, is far more likely to make a success of managing expositions of the Belgian hare than a large club in which there are always divided counsels, and which is very likely to be unwieldy and unmanageable. But in order to arouse interest and promote the industry of rearing Belgians it is absolutely necessary that the breeders of each locality should act in unison. If a few sincere, energetic people will organize and will work together upon business principles they are certain to arouse the enthusiasm of the public in general.

One good way is to form a regular, legally-organized incorporation. This invites the confidence of the community and gives standing to the enterprise. But, if this method is thought too expensive or too cumbersome, an ordinary company may be formed. In either case, those associating themselves should at once contribute sums of money sufficient to give a working capital in their treasury and to provide for the payment of all obligations likely to arise. Then, if an exposition is desired, as will usually be the case, let all pull together and call upon every resource, acting in all matters upon the same business principles that each would employ in his own affairs.

The show should be planned months beforehand, for time will be required to advertise and to enlist the co-operation of breeders. Six or seven months is not too long a period. The first step is to arouse the interest and rivalry of breeders by preparing and offering premium lists. The premiums should be as valuable as can possibly be afforded, everything considered. The club itself should offer money or other valuable prizes and can often secure special premiums from merchants, manufacturers and others in return for advertisements of their business to be given during the progress of the exhibition.

Next, secure a suitable hall or other location for the show, and be sure to provide for ample room. The income of the fair will be derived from three sources, entrance fees for exhibits, rental of floor space and admission fees from visitors. The fees for entering the different classes of exhibits should be a percentage of the prizes offered, usually ten per cent. The floor rentals should be graded so that a large proportion of the hall rental will be received back from them. It should be provided that a certain number of entries must be made in each class or the prizes for that class will not be given. An admission fee should be charged sufficiently large to cover possible deficiencies in rentals of space for exhibits, and entrance fees for the different classes. The exhibits should be arranged along aisles in the hall ten feet wide, in such a way that each exhibit will front upon an aisle, thus giving the competitor a chance to bring his stock readily before the attention of the public. Every reasonable facility, not trenching upon the rights of others, should be afforded each exhibitor to advertise and sell his stock.

At a small show the highest prize may be, say twenty dollars in gold, or even a hundred dollars, for a large exhibition, or a watch or diamond, or

something of that sort of equal value. This highest prize may be termed a grand sweepstakes, or an international championship, open to the world, or whatever else seems most appropriate. The number of classes will necessarily be proportioned to the amount of stock available for exhibition purposes in the particular locality and to the probable patronage of the exhibition in this direction.

Do not hold an exposition for more than three or four days at most. Three days is long enough in a city of one hundred and fifty thousand inhabitants. Stop while the interest of the public is still keen and close the fair in a blaze of glory. Be liberal with the press for five hundred miles around in the matter of complimentary tickets, but cautious in giving them to others. Although you may have friends whose attendance you may desire at the fair, do not bribe them with complimentary tickets. Because, unless your receipts are large enough to pay all bills your fair will be a failure. This is the reason so many fairs conducted by large clubs make failures. The moving spirits do not agree as regards matters of expense. Some are lavish in their notions; others are niggardly; but the common result is a host of unpaid bills that must be met by the promoters of the affair or else the whole thing ends in disgrace. Every expenditure in the nature of a reasonable investment should be made. Otherwise a tight hold should be kept upon the purse strings. As a rule the public will be liberal in patronizing these fairs and there is no need of financial failures in connection with them.

Finally, advertise freely, by means of posters and in the newspapers. If the fair is held in a large city, get reduced rates on the railroads from neighboring towns. At the Los Angeles exposition, in February, 1900, there was an attendance of nearly five thousand. All bills were promptly paid and money was left in the treasury. Secure a re-



SWEET MARIE. At 9 Months. Property of Bonanza Rabbitry, Los Angeles, Cal.
Weight $9\frac{1}{4}$ lbs; score $94\frac{1}{2}$; sire Lord Cayenne; dam Princess May.

liable judge to do the scoring and provide a committee of prominent citizens to devise and take charge of a plan for placing every competing specimen before the judge in such a way as to insure absolute ignorance on his part of the ownership of the animal and absolute impartiality in his decisions. Then, there can be no possible complaint on the part of disappointed exhibitors.

Bear in mind that all this means work and that organizing and carrying an exhibition of Belgian hares through to a finish is no occupation for a lazy man.

THE SCORE CARD VERSUS COMPARISON JUDGING.

It is impossible for a judge to impart to the owner of stock a definite conception of its value under the conditions surrounding a contest where a large number of animals are on exhibition. Suppose there are from twenty to one hundred hares to be compared and as many enthusiastic owners surrounding the table upon which the comparison is to be made, offering suggestions and interjecting remarks. Their personalities will inevitably make some impression upon the judge, no matter how honest he may be or how sincerely desirous of being impartial. Say what people may there is no rational, experienced breeder but will agree with this view that a judge, or any one in such a position, feel, at times, an almost irresistible desire to push a friend to the front. This is true of all public contests, whether in art, commerce, politics or for supremacy in physical attainments. Wherever there is rivalry people allow their enthusiasm for their friends to run away with their sober, honest judgment. No one can say in advance how far the upholders of any candidate for office will commit themselves to secure his election. The same fact is true in all lines and, where so keen an interest is aroused as is usually shown in exhibitions of Belgian hares, this spirit will inevitably be seen.

The score-card system gives the owner of each hare scored, and ever interested spectator, a definite idea of the rating of that hare, and also removes all temptation and opportunity towards injustice. At every exposition the judge should be kept in absolute seclusion until his work is done. No friend of an exhibitor should be permitted to interview him. Each hare should be placed before him in such a way that he will have no inkling whatever of its ownership. Then he should decide upon the merits of each specimen and make a record upon a score card to which he attaches his signature. The thing is done then beyond recall. The record has been made in writing. The exhibitor has been treated with absolute impartialty and the judge has committed his reputation to that rating and must stand or fall thereby. He can offer no excuses such as "I forgot," or "I didn't understand."

Unseemly squabbling, controversy and harsh criticism of the judge are common occurrences at all fairs or exhibitions where live stock competes for prizes and honors. This is true no matter what variety of stock is on exhibition, whether poultry, beef-cattle, horses, hogs or sheep. It will be equally true at exhibits of hares unless a system of scoring and judging is adopted whereby the judge must make his decisions "blind," that is under conditions that preclude all possibility of undue bias in favor of any exhibitor or exhibitors. This can only be done under a score-card system, because, where all the animals on exhibit are brought together for comparison, their owners will insist upon being present and something will develop to occasion on their part ill feelings towards one another or towards the judge.

The score card in common use is based upon the standard of excellence as agreed upon by leading associations of breeders of Belgian hares the world over. There is accordingly something definite back of the score card. By the method of

comparison each judge makes his own standard and may pass upon specimens with many mental reservations if he chooses, or may refuse to be governed by what others consider to be merits and defects in hares. It is astonishing to note how closely different judges, who have all been educated in the score-card system, will come together in deciding upon the merits of specimens. This matter has been thoroughly tested. Not only will the same judge rarely vary at different examinations of the same hare, where every precaution has been taken to preclude knowledge that the specimen has been judged before, but different judges, under the same system approximate very closely in their decisions. These facts eliminate as far as possible the element of caprice from the problem and give the public a standard by which to judge the judge. If his ratings are erratic; if he contradicts himself; if his decisions are far removed from those of others equally competent to express an opinion, he will inevitably fall in the esteem of the public and will give place to some other more worthy to be a leader. If, on the other hand, he is unprejudiced, fair, candid, accurate and consistent, he will inspire confidence and increase his clientage. When his decisions are in writing and on record, the public has some means of estimating his capabilities, but when his decisions are arbitrary and autocratic, as under the system of comparison, others have no means of calling him to account or of correctly estimating his abilities.

When we have advanced a little further in the system of registration which is close upon us, other advantages of the score card will be obvious, because, in certain phases of registration, the score-card ratings of registered sires and dams of specimens applying for registration will be important.

In every point of view the score card is of inestimable value to the uninitiated, for it tells them how near each

specimen comes to the ideal. It is a certificate of qualifications. For a man to presume to say that he can judge a hare without any standard in his mind is simply ridiculous, and the man who stoops to do this is presumptuous and autocratic. But when a judge puts his signature to a document, his reputation is at stake and he has committed himself in a way which makes him responsible. This very fact will tend to impress upon every judge a sense of his responsibility. In a word, this feature is just as essential to the Belgian hare industry as abstracts of title to the real estate business.

Suppose a man in Boston wished to purchase hares in California. The first query coming to him is "what value can I get for the means at my command?" How is he to determine this if he has no method of stating his wishes to the breeder in California? Shall he leave it entirely to the honesty of the latter? Suppose he wants a buck or a doe or foundation stock for his rabbitry? Is it not the simplest way for him to write and inquire at what price he can obtain stock rating, say, 95, or 93, or 92? If he finds that he cannot pay for the 95-grade animal, he may be able to reach the 93 or the 92. But he has at least a definite idea of the hares that he is getting, as compared with all other hares. On the other hand, if he buys by a system of comparison, he knows simply that he has received the best, or the second best, or third best hares held in stock by a single dealer and has no way of knowing whether or not they are as good as other people possess. You can't buy hares, from the fancier's point of view, by the pound or the dozen, as you would buy coal or eggs. Where the elements of value are as complex as those that make up the value of the Belgian hare, a more elaborate standard than simple weight or numbers is absolutely necessary. But we must have some standard, for there is a standard for everything, for water for irrigation, for gas and electricity,

feet and inches, pounds and ounces. There is even a standard for brains in the schools and colleges that educate our young men and women, and this standard is one of percentages. Once in a while a student may compete for a prize and be judged by comparison with the others competing for that particular prize, be it in oratory, mathematics, Latin, Greek, or something else. But when he goes out into the world and takes a place among other scholars, they want to know, not what his standing was on some particular occasion, but what his percentage was for his college course. Then they have a means of measuring him, not with a limited circle, but with all students.

Take another illustration of the disadvantage of purchasing without a definite standard of measurement. English breeders now admit that they have sent their finest specimens to this country—for the first time within the history of the industry. The prices offered were too tempting and they did what they had never done before, parted with their very best. Now suppose that a man in New York wants to buy from an English breeder. Is he simply to take the best, by comparison, of those that are left in the hands of our English friends? If so, how is he to know whether he is simply getting the best of a lot of scrubs, or is getting a really valuable animal? How can the English compare what they now have with those superb animals that have recently left their shores? Is it not sufficient for them to say, for instance, "this is nearly as good an animal as Champion Fashoda." The buyer would want to know how closely he resembles Fashoda and in what points he is different. If the two had been scored there would be an exact measure of comparison, good for all time to come, a measure especially valuable if both scorings were made by the same competent judge. But in the absence of such a record, there would be no means of determining the exact points or sim-

ilarity and dissimilarity between the two animals.

As an aid to breeding the score card is equally valuable, as may be seen at a glance. For the owner may have his does scored and can compare their merits and deficiencies with that of different bucks and can then determine to a nicety, which breeding of all those available would be most advantageous in each instance. For instance, a doe that is short on ticking, say standing a punishment of one and a half points, if mated with a buck equally weak in this respect, would bring offspring equally weak or worse. But, if mated with a buck stronger in ticking, say rated with a punishment of one-half or three-fourths, the young will show a vast improvement over the ticking of the doe. This is breeding-up, and the same reasoning applies to other sections, such as the shape of the back and the color of the hind feet, in fact, to each section.

The score card herein given is that which has been adopted by the National Association of Belgian Hare Judges as the best in existence. It has now been in vogue for three years. It was invented by Judge P. E. Crabtree, of Denver, an acknowledged authority upon this subject. It has been subjected to many time tests and has proven satisfactory to many associations of breeders throughout the East and West. It is the only practical method that has ever been presented. The association mentioned above made a thorough investigation of all methods and selected this as, in every way, the best of all. The farther their experience extends the better they are pleased with this system. The reader will note that the card is divided into twenty-nine sections and that every element in the beauty and value of a hare has been given a valuation. There may be some differences of opinion as to the relative value that ought to be given to different elements, but these differences of opinion are far

less important to this industry than a substantial agreement upon a basis which affords a definite and permanent record. We must either have accord upon this question among the breeders of the country or else have inextricable confusion. Moreover, the present score card harmonizes with the present standard of excellence. Any variation in the score card will necessitate a corresponding modification of the standard of excellence.

THE NECESSITY OF HAVING COMPETENT JUDGES.

An exhibition of Belgian hares will not be a success unless it has a competent judge to determine the merits of the competing specimens and to award the prizes. If the judge is hesitating, confused, partial, arbitrary or unreasonable in any degree, exhibitors will be dissatisfied and an unfavorable impression will be left with the public. An exhibit conducted with a poorly-qualified judge at the head of it will do the industry far more harm than good.

One method of ruining an exhibition is to mark all competing specimens extravagantly high under the mistaken notion that exhibitors will be pleased with a high score. This mistaken fancy brings the whole exhibition into contempt, for sooner or later, observation teaches exhibitors that their high-scoring animals are no better than others scored by a more conservative judge at a lower rating. This discovery leads them to distrust and despise the whole system, a result which need never be if the judge is skillful, fair and honest.

But fairness and honesty depend upon experience. A man cannot be competent to judge Belgians unless he has studied, observed and compared a great number under the best instruction. He must have an eye that is naturally keenly discriminating and trained by a long series of comparisons. Undoubtedly, there will be, during the next few years, numbers of pretended judges who will be practically imposters, men and

women lacking in sincerity, experience and natural ability, whose only object will be to coin a few dollars at the expense of confiding exhibitors.

Committees having exhibitions in charge must guard against these pretenders or their exhibitions will result in discredit to all concerned. It will be not only the right but the duty of such committees, in all cases of doubt, to insist upon a rigid examination and a test of persons assuming to possess the qualifications of a judge. A committee can easily satisfy itself whether the claims of an individual are well-founded or not. If the members of the committee are satisfied, the exhibitors and observers are likely to be satisfied also.

Doubtless, after a little while, the business of judging Belgians will be limited to those few who prove themselves most capable and these few will gradually establish in this country, by mutual agreement, on essential points, a system of judging that will be as nearly uniform as possible and mathematically exact.

In the meantime there will be some uncertainty as to the value of the decisions of this, that, and the other judge. But, in this profession, as in all others, the most competent will eventually take the lead and those committees who are most particular in their choice of judges will accomplish the most towards reaching this very desirable consummation.

A system of rating the qualifications of a judge precisely upon the same plan as the score-card system as applied to the rating of Belgians should be adopted by the committees of exhibitions in their examination of a candidate judge.

THE JUDGING OF JUDGES.

The growth of the Belgian hare industry is destined to give birth to a new profession, that of Belgian hare judges, the legitimate members of which will be men sufficiently equipped by natural endowment and by special training to pass upon the merits of hares offered in

competitive exhibitions or to score hares for owners in private.

It will be of the utmost importance to the ultimate future and well-being of the industry that the ranks of this new profession should be kept free from pretenders and from those whose attainments are not equal to their aspirations or their promises. Breeders in general and especially committees having exhibits in charge will do much towards this most laudable end for no man can long maintain himself in this profession, or in any other, unless his abilities are to a reasonable extent commensurate with his own estimate of them. In other words, not many failures or miscarriages of justice would be necessary to place a judge in a position where his services would no longer be required.

But those who enter this new profession can accomplish still greater good, both for themselves and for the industry at large, by guarding its ranks with the utmost vigilance in order to confine this honorable employment to those who are really worthy to participate. Open, competitive tests should be arranged among the judges of each district and, later, congresses or conventions should be held, at central points, open to the world, at which all who are interested should be invited to assemble and where all topics of importance could be fully discussed. All professions hold these conventions. Teachers, physicians, lawyers, even writers, come together frequently and consider those subjects bearing upon the advancement of their interests. And it is always noticeable that the stirring members of any profession, those who accomplish the greatest good and attain the greatest distinction, are the ones who are willing to come together for discussion, advice and mutual education.

By this means and this alone can the scoring and judging of Belgian hares be placed upon a definite plan, with a uniform system, one in which all breed-

ers, owners, dealers and fanciers can have confidence, and one which will make this business international in extent and above suspicion in character.

Contests of this sort should be held, in turn, in different sections of the country. Each should be under the supervision of leading citizens of the section wherein held, men who would command the confidence of contestants and of the public at large. These men should provide for rigid and thorough public contests in judging. Purses of sufficient value to be in themselves an incentive should be provided, each contestant paying a percentage of the purse offered, as an entrance fee, or the purse being furnished in some other equitable way. Contestants might be divided, when desirable, into different graded classes, each contestant passing, when qualified, from each class into that next higher, the contest closing with a grand sweepstakes competition, awarding the championship to the successful competitor.

The above is a very brief outline of a plan by which such contests could be conducted. This could be varied and developed to suit circumstances. In all cases the final result aimed at should be publicity, an opportunity for breeders, owners and the general public to become familiar with the abilities of the respective judges. This would be of great value to all concerned and especially to the judges themselves. It would interest the general public and insure a greater growth of the industry.

A STANDARD FOR RATING JUDGES.

For the most comprehensive delineation of the American Standard of Excellence, 15 points.

For the best explanation of the score card, 15 points.

For the most comprehensive explanation of the application of the score card to the American Standard of Excellence, 20 points.

For the highest rating in judgeship, 25 points.

For the least variation in test work,
25 points.

Perfection, 100 points.

HONORABLE APPLICATION OF THE SCORE CARD SYSTEM OF JUDG- ING.

Nothing can do as great injury to the Belgian hare industry as fraud practiced either by presumptuous or by legitimately authorized scorers. Frauds in any of the channels of commerce wreck institutions. Confidence in a system of judging the hare is of as great importance to the Belgian hare industry as is confidence in the stability of a bank to the success of its stockholders. Fictitious score cards, either overrating or underrating the value of a specimen will destroy confidence in perhaps hundreds of people who are more or less interested and as many more who might become interested. A few instances of this kind scattered throughout the country will do almost irreparable injury to the industry and turn many an intelligent possible recruit from entering the ranks of the fancy.

In the judging of hares there is unquestionably, for quite a time to come, an almost unlimited room for impositions by those who are unprincipled and care nothing for the good of the fancy but live in the present and for what money they can make out of it regardless of injury done to others. Such a person is just as likely to score a 91-point hare at 95 points, or even 96. And a trifle more money for his trouble would doubtless make him see the animal even higher in the scale of perfection and prompt him to make a valuation of 97 or even 98 points, sign his name and let her go. But in this as in other lines, the survival of the fittest will ultimately obtain, but, of course, this will never result until great numbers of people have been more or less injured in a financial way.

The disposition of people to take for

granted the say-so of Tom, Dick or Harry, the long-haired, Indian-fakir doctor, offers to the unprincipled, presumptuous character of the same ilk a wide and profitable field for his machinations in the hare industry. When people awaken to the fact that standard authorities in the judging of hares, or those who are truly expert and who excel in this capacity, are the proper persons upon whose judgment they should rely, then will humbuggery, to a great extent, meet its death and the up-building of the industry make rapid strides and become a source of great pleasure and great profit as well. A religious application of the score card system of judging is an imperative necessity and the man or woman who will sacrifice the sacredness of this method of judging should be exposed and condemned, and, in fact, placed on a par with the criminal who extracts money by false pretenses.

THE SPIRIT OF THE TRUE FANCIER.

He who loves animals and he who loves his business will always have the highest regard for the industry in which he is interested. Such a character will make sacrifices, if need be, to accomplish results that will be of permanent benefit. It is by such characters as this that the new ideas are presented, new methods employed, which may well be designated as progressive. The fancier at heart never tires of working for the good of the cause and he never pines and sulks because things do not go exactly his way, or because of failure to win in competition. His greatest anguish comes from a lack of opportunity to spread out, push on, improve the standing of the interest with which he is identified. The true fancier in any line is invariably a social character and is also open-hearted and liberal, and enjoys a tilt or a joke with one who has successfully competed with him, and, altogether, he it is who gets the

greatest pleasure out of his business and out of life generally.

In fact, but for this particular kind of a character there would be nothing but the old, non-progressive course in life we should see the man that just simply exists, passes the time and never creates a thought, never changes his course from one year to another. He still has the same old gray mare. He doesn't know her father or mother, never paid any attention to her breeding. He knows that she plows corn first-rate and that she never refuses to go: She never failed to get the family to and from church on time and old Sal is a good old nag.

Or when it comes to the bovine, the same is true. He don't know whether his yoke of steers were of the Devonshire or Durham breeds, or whether they are Hereford or Ayrshire, and "guesses" there was not any breed to them.

In fact, he does not know just how much milk old Blackie gives, or how much butter she makes, reckons she is pretty good cow, had her a long time. And this is an illustration of the ideas of the man who never has the spirit of rivalry and who is totally devoid of the sentiment of enterprise. No particular love for old Blackie. If she got sick "reckoned" she would get well, and he might take her a bucket of lukewarm water with a little salt in it, but never took sufficient interest to give her any special attention or regret, much her loss when she died, if there was another left in the yard.

This illustration goes on down the line from the equine to the bovine and so on. Now, it is not by such characters as this that the far-famed, beautiful Belgian hare has been evolved from the wild and untamed little cotton-tail. But the true fancier is ever on the alert for a new dash of blood to discover and he recognizes at a glance the qualities of the high type in whatever direction his mind leads and is never content until he has

something as good, and better, if he can produce it.

For the true fancier is really a producer and is not alone satisfied, though he may have the wealth of mines, with that which he may purchase, but he desires to show his handiwork in the product of his pens.

And so sure as he is defeated in the exhibition arena so certainly may you look out for him. The true fancier is never defeated. He may be beaten on an occasion but, to him, that cuts little or figure. He is living in the future and his hope and enthusiasm and spirit of rivalry are only augmented and his forces are soon put into action and he says to himself, "Never you mind, Brother Smith." "It is alright, Mrs. Brown."

"We will see you later. We will meet you at Boston later on, or at Madison Square. You will have a race the next time you meet me." These are the thoughts that go through his mind, and, in his mind's eye, he pictures out the beautiful points that may be possessed by the specimens that have defeated him.

He at once establishes his ideal and this by criticising the specimens that have defeated him. The intelligent and progressive fancier is a student, a mechanic, an artisan, and he is even a warrior and is also, like the great Alexander, sighing for new worlds to conquer.

He, too, is most liberal toward judges. He never doubts the judgment of a sincere and competent, well-tried authority. He recognizes authority. He goes into competition expecting to win something, but not determined to win all, and not certain that he will win anything and, if he meets with defeat, he is certain to learn why it was that his competitor out-stripped him in producing a better specimen. But he never accuses the judge of "having it in for him," or of being stuffed and having a premature opinion because of the

ownership of certain specimens being known.

In the live-stock fancy the field is wide and the variety of conditions is great and the points of merit and the points of disqualifications are numerous, and through carelessness, and sometimes through unavoidable occurrences, the true and expert fancier and breeder is liable to meet with defeat, but he who possesses the true love for animals is invariably endowed with a reasonable amount of respect for his own kind and a would-be fancier who ignores qualities in the animal kingdom surely will be lacking in these attributes which make a man a man, a friend a friend, a student wise, a mechanic and an artisan appreciated, and the fancier in pet-stock successful and admired.

Greed, envy and petty jealousy find no place in the heart of the true sportsman. Really, these manifestations are detested by all lovers of friendly competition. The progressive fancier delights only in the success achieved through his own efforts and the competition arena affords the opportunity for a demonstration of skill and to the enterprising character success is a great treat and defeat is an invaluable lesson. But the grumbler, he who cannot take his medicine with a good grace, finds no pleasure in this circle, though he may, and usually does, stir up more or less commotion. Nevertheless, he is soon lost and forever forgotten as one of the fraternity though it may be that he will need the repeated tumbling of a brick house upon him to convince him that he is out of his realm. But, sooner or later he will fail to find interest because of the lack of attention that his grumblings over his failures to win elicit from fellow-competitors and the public at large.

A BELGIAN HARE ENTHUSIAST.

Dr. B. C. Platt, one of the owners and managers of the Bonanza Rabbitry, is probably the most enthusiastic man in

Southern California over the breeding and rearing of Belgian hares. He is the acknowledged "father of the industry" in this section, this title being granted to him by common consent from the fact that he introduced the Belgian into Southern California and proclaimed its merits so effectively that, within eighteen months, some fourteen hundred rabbitries had been established, and the number of hares had increased from a few hundred to an estimated total of a quarter of a million. Undoubtedly this is the most remarkable record ever made anywhere in the propagation of any domestic live stock, big or little.

As general manager of the Belgian Hare Exposition held at Los Angeles in February, 1900, Dr. Platt made another enviable record, both in the success of the exhibition and in the success of his own rabbitry in competition. This was the first exclusively Belgian hare exposition ever given and was the largest in attendance of visitors, number of exhibits, variety of classes and of the value of the prizes, and also the most satisfactory to all concerned, of any ever attempted. The Bonanza Rabbitry exhibited 114 specimens, all but three of its own breeding, and captured twenty-one prizes, including the international championship and several prizes for the best, all-around exhibit in different classes. Dr. Platt joined the class in scoring which was held under the instruction of the official judge and scorer, Mr. P. E. Crabtree of Denver. He attained a very high average in this class and is now a leading spirit in the National Association of Belgian Hare Judges, an outgrowth of the movement started at this exposition. This association has for its objects everything that is for the best interests of the Belgian hare, including a system of registration, the promoting of fairs and exhibitions and the education of the public in every phase of this subject.

Dr. Platt is a man who is ready to encourage all, including competitors, who are sincere in their efforts to keep the

Belgian hare industry upon a high plane, both commercially and from the fancier's standpoint. And he will undoubtedly be heard from often along this line.

CHAMPION FASHODA

Head of Dr. Platt's herd and is acknowledged to be the nearest approach to the ideal in existence.

Fashoda is a phenomenon, a happy product of scientific mating producing the fortunate results that sometimes follow the best directed efforts in the breeding of live-stock. A great race horse, for instance, may beget scores of youngsters that will trot in the 2:20 class, but only one in a lifetime with the combined qualities of body and brain, the speed, the endurance, the intelligence and the pluck, to lower a world's record. So Fashoda is the climax in a long line of great ancestors and a multitude of worthy descendants.

Fashoda is the only living buck approaching perfection in style, symmetry and color and also of standard weight. In fact, he is nearly a pound over the standard. Before him the best breeders of England—and that means of the world—found it impossible to unite the fine lines desired in the ideal with the full size and weight demanded by the standard of excellence. As to his form and symmetry we can only refer the reader to the excellent reproduction of a photograph which we give as a frontispiece to this book and to an inspection of Fashoda's score card which we also present at the close of this description, for symmetry and form in a hare is something impossible of accurate description by words alone. We can only repeat that, in these respects as in all others he is the very best that the world has produced.

When we come to the element of color we find that Fashoda possesses a rich, rose-gold, under-color, together with beautiful, broadly-defined and wavy ticking distributed to a nicety, giving

to his coat a luster and depth of color equal to mahogany tint, extending from head to tail, from vertebrae all but to hocks, and nearly full depth of sides. The lacing of his ears could scarcely be better, and from the lacing over the outer surface of the ears, extends the rare and beautiful tint best described as a golden tan. A breadth of this also shades the sparkling ticking of the sides into the snowy white of his belly, and under his jaws, blends with the brilliant flush of the rufus-red on his broad, splendidly-arched breast. All of his feet are of the indefinable coloring now the object of every fancier's efforts and the most difficult element to attain in the whole standard of perfection. This wonderful shade is really a new thing in nature. It resembles a mahogany but has a brighter luster. It is like a wine color but not so deep a shade. It might be called maroon but is a little darker. Define it as you may, it gives a finish to the whole effect as yet rarely seen upon Belgians.

Fashoda has strikingly large and brilliant eyes of exactly the correct shade of hazel, beaming with intelligence, spirit and docility. His bearing is alert and strong. He assumes, of his own accord, poses that are models of grace, and the immediate effect upon everyone who sees him, is that of a beautiful wild creature reduced to a congenial captivity where all may admire him.

We may summarize this description of Fashoda by quoting from some of those who saw and knew him before he came into our possession. He captured twelve first prizes on the exhibition circuit of England in 1899, also seven specials, four medals and four challenge cups, including the Crystal Palace cup, valued at \$250, a trophy offered by the largest pet-stock association in the world, which holds an exhibition in London every year. An English authority says:

"His feet and legs are enough to turn



CHAMPION FASHODA.

(Bonanza Pose.)

Property of Bonanza Rabbitry, Los Angeles, Cal.

the eyes of a breeder green with envy," and again, "An absolutely correct style and front." Another, "The best ever seen." Still others say: "With age he gets more beautiful," and "With his new coat in full bloom he will be the ideal." All say: "He wins easily in any company," and "He is the popular winner." and again, "The crack Belgian of the period." Popular sires produce popular young, who sell at popular prices, and are always sought after by progressive breeders.

An old gentleman of refinement and culture, after watching our hares and especially Fashoda, the other day, for nearly an hour, remarked: "This is a treat equal to looking at beautiful women. The more you look at them, the more you want to."

On the following page is the official score awarded to Fashoda at the Los Angeles exposition, a card which constitutes a record the same as the record of speed made by a trotter or pacer in a race under competent authority.

THE COMMERCIAL FUTURE OF THE BELGIAN.

Dr. B. C. Platt, the author of this manual, during a course of experiments extending over nearly six years, has kept steadily in view both of the important phases of the Belgian hare industry, namely, the rearing of the hare as an object of pleasure to fanciers and the rearing of the hare upon an extensive scale purely for his value in the commercial world. Both of these phases will be important in the future, but the commercial phase will undoubtedly interest a greater proportion of the population and be conducted upon the larger scale. Men of comparative leisure to study the hare as an interesting species, a new gift of nature, are unlimited in number. But the hare as a money-maker and a bread-winner will appeal to many thousands. This has been the experience of the old world and will be the experience of America.

Foreseeing this point, Dr. Platt, after securing and producing many prize winners and building up the finest herd of breeding animals in existence, confining himself strictly to breeding rather than to speculation, has also conducted exhaustive experiments in making the Belgian as fully available as possible as a factor of commerce, strictly defined. We have already discussed the value of the meat sold fresh on the market. We have now a few words to say as to the canned meat, the pelts made into leather, the furs for garments, robes, rugs, etc., and the novelties that may be made from the feet

Few people have an adequate conception of the immense proportions attained in providing the staple articles of food consumption. Figures are dry reading and it is rare that any man informs himself upon the production of wheat or beef or pork unless he is directly interested in the industry from a financial standpoint. When he does read up on one of these topics the average man is astonished at the vast amounts of food supplies required by the people of any great civilized country.

The hare industry is so new that all may be forgiven for the ignorance which is universal in America in reference to its merits. But in the Old World greater progress has been made. These countries are thickly settled, cultivation is intense, wild game has all been destroyed or is reserved for the delectation of the nobility and the immensely wealthy. Therefore, when so dainty an article of food as the Belgian hare is placed upon the market, it is consumed in immense quantities. The following statistics will give some conception of the value of the rabbit industry in certain countries. We shall merely add that there is no reason why these apparently phenomenal records may not be duplicated in almost any portion of the United States.

The meat of the tame rabbit is consumed in great quantities in France, Great Britain, Germany, Belgium and

OFFICIAL SCORE CARD of the
NATIONAL ASSOCIATION
of Belgian Hare Judges
 Adopted to the AMERICAN Standard of Excellence
 [INCORPORATED]
 HEADQUARTERS: LOS ANGELES, CAL., U.S.A.

DR. B. C. PLATT, President Los Angeles.
 H. C. HALFPENNY, Vice-President Los Angeles.
 MRS. S. C. MARTIN, Secretary Los Angeles.
 MRS. J. F. BOYD, Treasurer Los Angeles.

Charter Members—P. E. Crabtree, Denver; C. E. Goodsell, San Jose;
 Mrs. M. E. Throop, South Pasadena; Mrs. Fannie D. Guttery,
 Santa Barbara; W. J. Irwin, Los Angeles; Dr. B. C.
 Platt, Los Angeles; H. C. Halfpenny, Los Angeles;
 Mr. S. C. Martin, Los Angeles; E. M. Hatch,
 Oakland; J. R. Guttery, L.L.D., Santa
 Barbara; Dr. L. C. Boyd, Los Angeles;
 S. S. Boal, Los Angeles; E. F. Melville,
 Los Angeles.

Card No.

Register No.

Class *International*
Championship.
 SPECIMEN:
 Name *Fashoda*
 Date of Birth *Dec 1898*
 Marking
 Weight *8* lbs. *12* ozs.
 Owner's Name *Edmer C. Platt*
 Address *Los Angeles Cal.*
 Exhibition *American*
Breeders of Belgian
Hares Incorporated
Exposition, Martand Feast
Los Angeles Cal Feb. 1900
B. S. Hogan President
Geo. Duffel Secretary
 Premiums *\$100.00*

Score *75 1/2*
 Judge *P. E. Crabtree*
 Address *Denver, Col.*

*The use of this card is limited to the members of the National Association of Belgian Hare Judges. Names of Scoring Judge should appear in the above list of names.

PATENT APPLIED FOR.

(OVER)

OFFICIAL SCORE CARD of the
NATIONAL ASSOCIATION
of Belgian Hare Judges
 Adopted to the AMERICAN Standard of Excellence
 [INCORPORATED]
 HEADQUARTERS: LOS ANGELES, CAL., U.S.A.

Class *Mat Buck*

	Size	Shape	Color	Quality
Body	+	+	—	+
Angle of Stry Hare	+	+	<i>1/4</i>	+
Color 20	+	+	<i>1/4</i>	+
Sides	+	+	<i>1/4</i>	+
Hindquarters	+	+	<i>1/4</i>	+
Jaws	+	+	<i>1/4</i>	+
Ticking 15	+	+	<i>3/4</i>	+
Body	+	—	+	+
Flank and Rib	+	<i>1/4</i>	+	+
Symmetry 20	+	—	+	+
Loins	+	—	+	+
Head	+	<i>3/4</i>	+	+
Ears 10	+	+	<i>3/4</i>	+
Lacing	+	+	<i>1/4</i>	<i>1/4</i>
Otherwise	—	—	<i>1/4</i>	<i>1/4</i>
Eyes 10	—	—	—	—
Legs & Feet 10	—	<i>1/4</i>	—	—
Fore Feet	+	+	—	+
Hind Feet	+	+	—	+
Size 5	—	+	+	+
Condition 5	+	+	+	—
Fur	+	+	+	—
Neck 5	+	<i>1/4</i>	+	+
Imperfections	—	<i>1/2</i>	<i>2 3/4</i>	<i>1/4</i>

Perfection 100
 Imperfections *4 1/2*
 SCORE *75 1/2*
P. E. Crabtree Judge
Denver, Col.

PATENT APPLIED FOR.

(OVER)

OFFICIAL SCORE CARD.

Reduced fac simile of the Official Score Card of the National Association of Belgian Hare Judges, showing Champion Fashoda's score in which he won the International Championship Prize of \$100.00 in gold at the greatest Belgian hare Exposition, mart and feast ever given anywhere. Los Angeles, Cal., February, 1900.

Holland—in fact, all the civilized countries in Europe, and it is said to be especially relished by epicures. Paris alone is reported to consume weekly over 190,000 pounds of tame rabbits, or 10,000,000 pounds annually.

A Trappist monk from the Cloister La Trappe, France, established a rabbit-breeding farm, and from there in a very short time the meat became a standard food article in France, Belgium and Holland.

A German of French descent, Charles de Grody, visited France and studied and examined the process of raising, preserving and canning the animals. He went with his new enterprise to Great Britain, where he succeeded in getting capitalists to invest \$10,000 in it.

At the time his partners had little confidence in establishing the article, but in the course of little over a year the manufacture and sale took such dimensions that they were compelled to build additions to the factory at the cost of \$500,000. They were compelled in four years to buy from Ostend alone 300,000 rabbits weekly, besides their own product. They are now said to consume in Great Britain and Ireland 70,000,000 annually.

In those countries, meats are much higher than in America, so it is safe to estimate the price realized by the hare farmer as one dollar a head, the retail price is quite double. Here is an illustration of the adage, "Very valuable articles are done up in small parcels." Surely bunny is a valuable animal, for he outclasses all competitors in meat making and profit yielding.

This industry is to be started in Chicago and will bring a new food into our markets in the shape of canned rabbit.

A representative of the great rabbit raising industry in Great Britain is looking for a large tract of land near Chicago that can be turned into a tame rabbit farm. Here rabbits will be raised by the million. Their flesh will be canned and shipped all over the country; their fur will be prepared and put upon

the market under the name of "electric seal." Fur of this sort has recently become very fashionable, and has made a large market for itself.

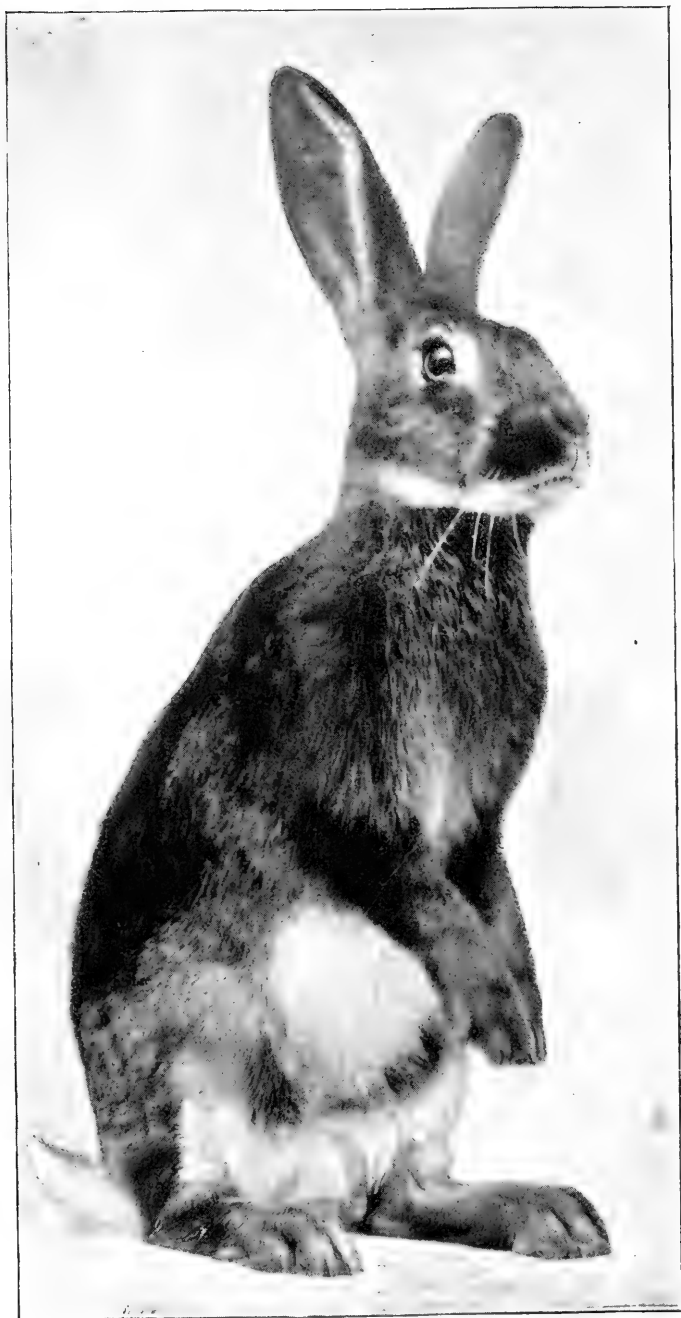
CANNING THE BELGIAN.

Realizing that the majority of the producers rearing the Belgian must be reduced to a business proposition we have made extensive experiments to show the feasibility of canning the flesh of the Belgian.

This is an important industry abroad but has not been undertaken on an extensive scale in this country. We can show, however, to the satisfaction of any inquirer that the flesh of the Belgian is wonderfully adapted to this method of treatment. It makes a rare delicacy, far superior to canned chicken. The white, tender, toothsome meat of the Belgian, preserved in a small quantity of the liquor or gravy, will keep admirably and will prove a most attractive novelty as compared with chicken, turkey, turtle, and similar high-class canned goods. The flesh of the Belgian will be cheaper because there is less waste. At least five pounds of clear, boneless meat, every particle of which is eatable, may be secured from each five months old hare of average size and weight. In this country this branch of the industry is as yet in its infancy but, like the different uses of the pelts of the Belgian, it is destined to attain enormous proportions.

THE VALUE OF THE PELTS.

We have demonstrated that the pelts have uses almost unnumbered. The first of these is for leather. To the surprise of all investigators into the qualities possessed by the leather made from the pelt of the Belgian hare, it has been found to be as tough as buckskin and is adapted to a far greater variety of uses than the buckskin. A strand the width of a shoestring clipped from a well-tanned hide possesses tensile



YOUNG FASHODA. Property of Bonanza Rabbitry, Los Angeles, Cal.
Sire, Champion Fashoda; dam, Bonanza Queen II. The peer of his illustrious sire.
Reserved for our stud.

strength almost equal to iron wire of the same thickness. In fact, few men are strong enough to break such a strand by pulling it with one hand against the other.

We have shown that the leather is especially adapted to use for whiplashes, for covering baseballs, for braided reins to riding bridles, for Spanish riatas, for belt lacings, trimmings to suspenders, shoe uppers for both ladies' and gentlemen's shoes, for gloves equal to kid, for book-bindings, burnt-leather work, doll bodies and an almost endless variety of similar uses. It is readily tanned to resemble chamois skin and the skins of younger hares may be tanned and processed to duplicate the finest of kid. We have worked out various processes of tanning, several of which are very successful for the different uses. It is impossible to estimate the enormous demand that may arise for Belgian hare leather for these purposes.

FOR USE IN FURS.

The high-type, up-to-date, large-sized Belgian, with his rich rufus-red color, handsomely ticked, with either the snowy white or the creamy belly and the light, buff-colored side, furnishes a pelt that can be made into a handsome garment without coloring. But there are different processes of coloring, especially the electric seal, which add variety. The electric seal is a black and has been in vogue among furriers in Europe for a quarter of a century. These furs uncolored are especially adapted for children's wear, in caps, capes, muffs, boas, collars and for fur linings to gentlemen's overcoats, for linings to the wrists of gloves or for the whole glove or for mitts. Beautiful robes and rugs may also be made from these. In fact, these furs are adapted to any use of fur possessing great warmth and great durability.

AS A NOVELTY.

The hare's foot is mounted and sold

in jewelry stores as a charm. There is an enormous demand for these. The retail price, with inexpensive trimmings, is two hundred and fifty dollars a thousand and which would require five hundred hares. Here we have a value of fifty cents for a hare in the first joint of his front leg.

AN ITEM OF PUBLIC INTEREST.

Our city parks and our mountain resorts should be stocked with the Belgian hare. A few piles of boulders, a couple of two-horse loads in each pile, scattered through the parks, would afford sufficient protection for the hares during the dry season. In winter they should be provided with nest boxes set upon three-inch legs. These should be placed among the boulders and covered with a roof. The hares would live upon the blue-grass lawns if they were also provided with a bale of wheat or oat hay or straw. They would require some coarse fiber to go with the lawn grass, which is too young and soft to afford a proper ration alone. The hares would be a source of much amusement to children, and would also be interesting to children of a larger growth. In the forest preserves the hares should be protected by statute just as other game is protected. At stated seasons much sport could be had in hunting them. Tons upon tons of the delicate meat could be had for the taking.

SUMMARY.

In a word, we have in the Belgian hare a fascinating animal as a pet and a novelty. Probably, throughout this wide country there are not more than two or three thousand of the best class and the greater portion of these are yet very young. This insures an increasing and enormous demand for hares of this class for several years to come and with a steady increase in price. Then we have an undetermined number of hares of a lower grading, most of which will ultimately be utilized as already indi-

cated in the arts and industries, as plain factors in commerce. From this beginning this industry will assume proportions which will astonish even the most ardent enthusiasts, creating a demand which will exceed the supply for many years. It will assume gigantic proportions as soon as capitalists realize the value of this new field and commence to interest themselves.

AVOID INBREEDING.

Don't attempt to build up a herd of hares from in-bred stock, or from stock that is stunted, weakly or deformed, or descended from stock that has been poorly cared for or from stock that is akin.

Science and intelligence produce results from the Belgian just as they have produced our noble Jersey and our spirited and magnificent families of blooded horses, from the beautifully-colored, symmetrical and graceful Arabian, through the kings of the English turf to the Kentucky thoroughbreds and our famous American harness horses. The first principle of scientific breeding, as applied to the Belgian, lies in an ability to select and mate individuals for producing definite results in higher types approaching the ideal. This ability is a rare accomplishment. Hence the breeding of improved types is, for the few who can bring it about, a permanent and profitable industry. There is a short cut of establishing points of excellence, as required by the standard of excellence, namely, inbreeding. Many fanciers adopt this means with a certain degree of temporary benefit in money returns. But in the end, this process is disastrous and often leads to final abandonment of the business. Breeding closely related hares may establish points of color or other points desired, but also brings weak constitutions and a tendency to contract colds, which is the greatest obstacle to success in this industry.

On the other hand, outcrossing, judiciously employed, lends additional vi-

talidity to the progeny. Therefore, although the points sought for may not be secured so quickly as by inbreeding, nevertheless, there is no comparison as to final results. For hares without vigor are sources of neither pleasure nor profit.

Don't make pens less than 3 by 5 by 16 feet, carpeted and covered with wire. Don't place hares on hard floors, whether cement, brick or stone. Don't make the pens of lath. The hares will gnaw out or dogs will break in. Wire alone gives the circulation of air and is therefore best.

Don't fail to separate the sexes at ten weeks of age. Don't allow more than one animal in a pen after four months unless they have a large run in field or paddock. Even then do not allow several bucks in the inclosure except after castration.

Don't allow a doe to raise more than eight young in one litter. Don't breed her until her young are a month old. Don't allow young to run with doe more than six weeks from birth.

In breeding be sure to take doe from pen of the buck immediately after the second service. Don't handle a doe after she is two weeks with young. Don't move or ship a doe after she is with young fifteen days. Don't change her nest-box in any way after she has made her nest or after she has kindled. If you do she may never go near her young again. Don't make the partition in her nest-box less than three inches high, when winter boxes are used. This will confine nest and young. Twenty days after kindling remove the partition.

Don't allow less than eighteen inches square for nest space in nest-box back of the partition. A young doe will commence to make her nest about a week before kindling time. An old doe will commence fully two weeks before. She should be in her permanent quarters before this time. To ship her or move her during the last two weeks of her period of gestation is to take chances of in-

jury to the mother and perhaps loss of the litter.

Never catch or handle young hares by the ears. The muscles are not as strong as they are later. They may be weakened and the ear permitted to drop, thus disfiguring the animal. It is so natural to catch hares by the ears that special warning on this point is necessary. Don't fail to bear it in mind. Take the animal by the skin right over the shoulders—a full handful and hold the hare out from your body, or by the haunches, which method is still better.

Never allow dogs to play around the pens or to jump at and frighten the hares. There is certain to be a loss in some way if this is done. Cats will do no harm as long as they are kept out of the pens and may be useful in catching rats and mice. They will destroy the young hares if the latter are permitted to stray out of the pens so as to come within reach.

Remember that hares cannot be kept healthy if confined in little boxes. Even if these boxes were cleaned three times a day foul air would prevail. Anyone can readily see the differences in the appearance of these animals if they have an opportunity to compare those that have been closely confined with those that have had the freedom of large pens. Don't purchase stock for establishing a rabbitry without investigating these differences.

Don't neglect to keep cured hay or straw, grain and water constantly before the nursing does and to give some kind of succulent food once a day. In other words, their staple food should be well-cured grasses and grain, but they should have some green food to mix with this. The hare is a ruminating animal and chews a cud. She needs the cured hay to make this, but she also needs some green food for health. Even when hares are allowed to run in fields or kept in portable cages they should have cured hay. They require the fiber which is lacking in young grasses. Don't give wet grain, grasses or any kind of vegetables when wet with dew or rain. Remember that the best results are secured from feeding oats, wheat-bran, alfalfa hay, and green alfalfa that has been allowed to grow until it has bloomed.

Don't allow your hares to get wet or their pens to become wet and muddy.

Don't omit to keep before your hares a lump of rock mineral salt. A little salt is good for them. They will not take too much from the lump salt.

Don't fail to remove the old nest straw each time when you wean the young and to give the does fresh straw two weeks before you expect another litter.

Don't fail to place a tray a foot square, with sides an inch high, containing bran, close to the nest box as soon as you notice the young at the opening of the box, or about the fifteenth day of their existence.

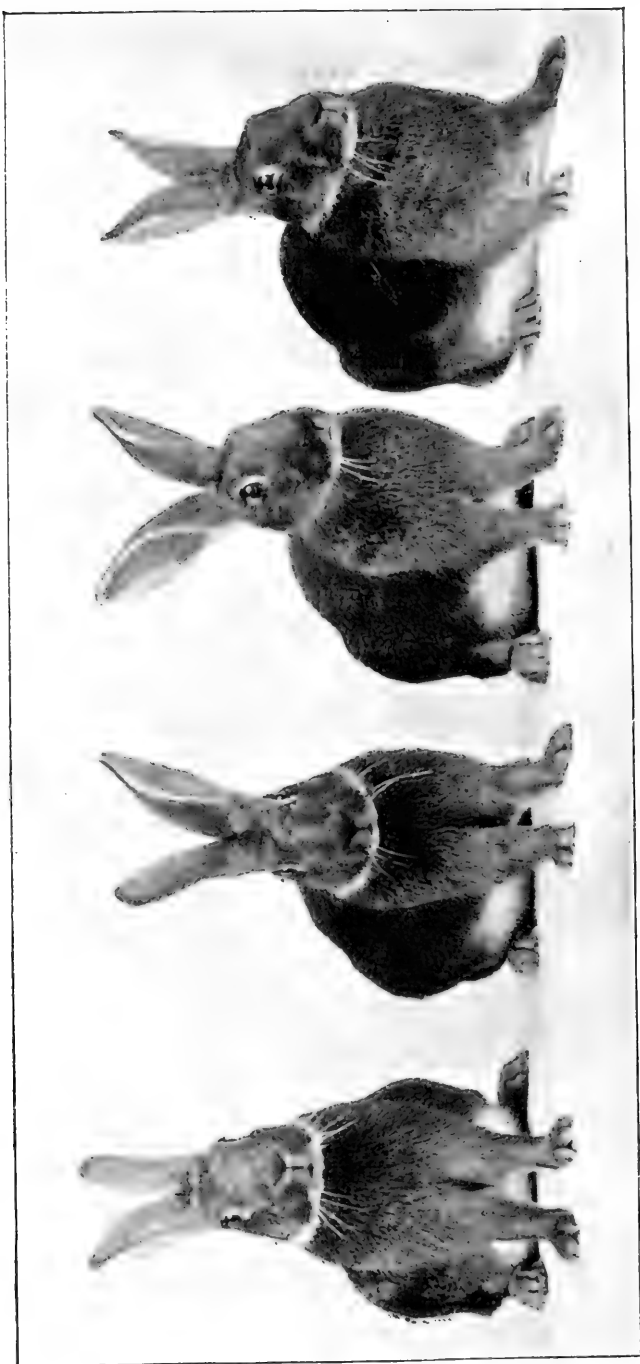
Remember that the young are to have no cold water until they are weaned. After that fresh water should be placed before them twice a day from April 1st to November 1st and once a day the remainder of the year. They should have constant access to fresh water.

Don't neglect to sweep up the droppings at least once a week. Daily is better.

Don't neglect to give the same consideration to buyers from your rabbitry as you desired to receive in establishing your own. Don't neglect to name your breeders and build a pedigree for succeeding generation. Don't expect to get prize winners from small or inferior stock. Don't neglect to make a record of the name of each purchaser and of the stock that he buys of you. This may be consulted at any time, and your customer, and those to whom he sells, may thus avoid the possibility of in-breeding through exchanges or sales of stock that is akin. Never sell to a purchaser both sexes that are akin, or stock that is maimed or unsound from any cause whatever.

Don't place strange animals that are over four months old in the same pen, or in the same crate for shipping. Never ship stock any distance before it is three months old. Don't ship in crates with closed sides or ends, or in crates that are not supplied with self-feeding grain boxes, hay baskets and drinking fountains.

In brief, use your common sense in all particulars. Remember that you are dealing with a highly-organized, sensitive animal, one that responds quickly to liberal care and as quickly to neglect or indifference. The gratification of success should be a sufficient incentive to painstaking. If it is not, then don't go into the business at all. The hare is too noble an animal to be mistreated through ignorance or carelessness.



MYRTLE, MAYFLOWER, MARIPOSA LILY AND MARIGOLD.

Litter sisters at 7 months of age. Sire, imported Lord Britain; dam, Bonanza Beauty. Scores $94\frac{1}{2}$, $94\frac{1}{2}$, $94\frac{1}{2}$ and 95. Weight, 9, $9\frac{1}{4}$, $9\frac{1}{4}$ and $9\frac{1}{4}$ lbs. Lady Vic, a litter sister, won the American Championship purse of \$50.00 at the great Exposition, February, 1900, Los Angeles, Cal.

Bred at Bonanza Rabbitry, Los Angeles.

VALUABLE SPECIALTIES FOR RABBITRIES.

Dr. B. C. Platt has invented and manufactured a number of specialties indispensable in every well-appointed rabbitry. They include everything that the breeder needs for his own convenience and for the comfort and health of his pets. We sell all these supplies in quantities to suit, wholesale or retail. We quote herein retail prices. Prices on larger quantities given on application. These articles are protected by letters patent.

OUR HAY RACK.

Is the neatest and most convenient known for feeding hay. It is constructed of strong wire and is very durable. Can be adjusted to any pen in a moment. With this rack it is impossible for hares to catch their ears to or do themselves any injury. Price, \$2.50 per dozen.

THE BONANZA SELF-REGULATING FEED BOX.

These boxes prevent the waste of food and keep it always clean. They are made of galvanized-iron, are neat and ornamental, can be regulated so that the supply of feed may be greater or less in accordance with the number and age of the hares in a pen. Will save their cost in feed within a few weeks. They are 5 by 10 inches at the base, and 8 inches high. The self-regulating device is an adjustable slanting slide. Price, each, 75 cents. Per dozen, \$7.00.

SELF-REGULATING WATER-FOUNTAINS.

Made of galvanized iron; cylindrical in shape, with a circular base. By an application of a simple law of mechanics the two quarts of water contained in one of these fountains is suspended in the circular chamber and trickles out into the basin at the base as taken away by the hares. Water is kept fresh, clean and pure. Price, each, 50 cents. By the dozen, \$5.00.

The above three devices are economical of time and labor as they do not require frequent refilling.

BRACKETS FOR SUSPENDING WATER FOUNTAINS.

These brackets retain the water- fountains at any desired height above the ground. Made of strong wire, readily adjusted, keep the young hares from getting into the water, defiling it and injuring themselves. Price, \$1.00 per dozen.

SHIPPING CRATES.

Made in sections suited to shipping a single hare or half a dozen young ones that have been reared together and will dwell in harmony. As many sections up to six as are desired may be added. These are one foot in height and two feet in diameter. They are circular in form. They will last a life time. Hares shipped in these crates take long journeys and arrive in the pink of condition. Express companies endorse this crate and return it at half rate. Price, single section, \$10.00.

CERTIFICATES OF SALE AND PEDIGREE BLANKS.

For sale in books of one or two hundred, bound. These are ornamental and complete. Neatest of anything yet devised. Certificate nine by twelve inches, artistic in design, beautifully printed on a fine quality of paper. Contains full history of animal sold, extended in tabulated form. Stub serves as a record of the transaction and a private herd register. Price, book of 100, \$2.75; book of 200, \$4.00. We print in title of rabbitry and name and address of proprietor. Will employ a cut of any animal that may be desired. Cuts must



ELMER E. PLATT.

Son of Dr. B. C. Platt and associate proprietor of Bonanza Rabbitry, the recipient of a pair of rabbits on his eighth birthday, June 13, 1895; from this beginning the Bonanza Rabbitry of today has been developed.

be two inches by four and a quarter inches, half-tones. When we furnish half-tones from photographs furnished us, the cost is \$2.25 additional.

CERTIFICATES OF BREEDING.

Prepared on precisely the same plan as the above. Give full pedigrees of the bucks which they represent. From photograph of the buck desired to be illustrated on pedigree we will furnish half-tone and printed pedigree in extended tabulated form. Where cut is furnished we will furnish book of 100 blanks for \$3.25. When we furnish half-tone from photographs furnished us there is an additional cost of \$2.25.

ALUMINUM EAR-TAGS.

Light, substantially made, of the best grade of this material, accompanied by a suitable size and quality of annealed aluminum wire, keeps the tags secure. Numbered consecutively in a series of from one to one thousand. Price \$1 per hundred. Punch suitable for setting, special make, 75 cents.

A SUPERIOR FORM OF PEN CARD.

These when filled, serve as a private herd register. We print with title of rabbitry, or name of owner, without extra charge. Price \$1.00 per one hundred.

Dr. B. C. PLATT, 930 Grand View Ave, Los Angeles, Cal.

REGISTER YOUR HARE WITH THE NATIONAL ASSOCIATION OF BELGIAN HARE JUDGES. WE HAVE THE BEST SYSTEM EVER DEvised.

OUR PLAN.

We propose to divide all hares sent to us for registration into three classes. The first will include record-makers, and will be called the record class. This will include hares that have won prizes in open contests in public exhibitions. The second may be termed the general class. Into this will be admitted all hares that have reached the age of six months and score 90 points or higher. The third class will include hares under six months that have descended from prize-winning, registered stock, either sire or dam. It will be called the junior class.

We shall have an additional book in which names selected for hares will be recorded. No other animals will be recorded under the same name. This insures protection to a breeder in the use of a name even before the animal to which the name shall apply has been selected. This may be called advanced registration.

The uniform fee for registration in either class will be one dollar. In cases when a name is registered the hare to which that name shall apply will, when selected be assigned a number and a certificate of registration without additional charge. Transferring from class No. 3 to the record class, whenever a specimen becomes eligible, will be made for a fee of fifty cents and a certificate of registration, giving record of winnings, will be furnished.

Certificates of transfer from the original owner registering to a buyer will be made for a fee of twenty-five cents.

Rules governing, instructions in general, together with blank forms of applications for registration, and forms of certificates for transfer, sample of certificate of registration, also an essay on the advantages of registration and of scoring hares, will be sent upon receipt of ten cents in stamps or coin.

The certificate of registration is the most carefully prepared, beautifully designed and artistically illustrated piece of work ever put forth by the promoters of any live-stock industry in America or elsewhere. It needs only to be seen to be thoroughly appreciated.

Address Dr. B. C. PLATT, President of the National Association of Belgian Hare Judges, 930 Grand View Ave., Los Angeles, Cal.

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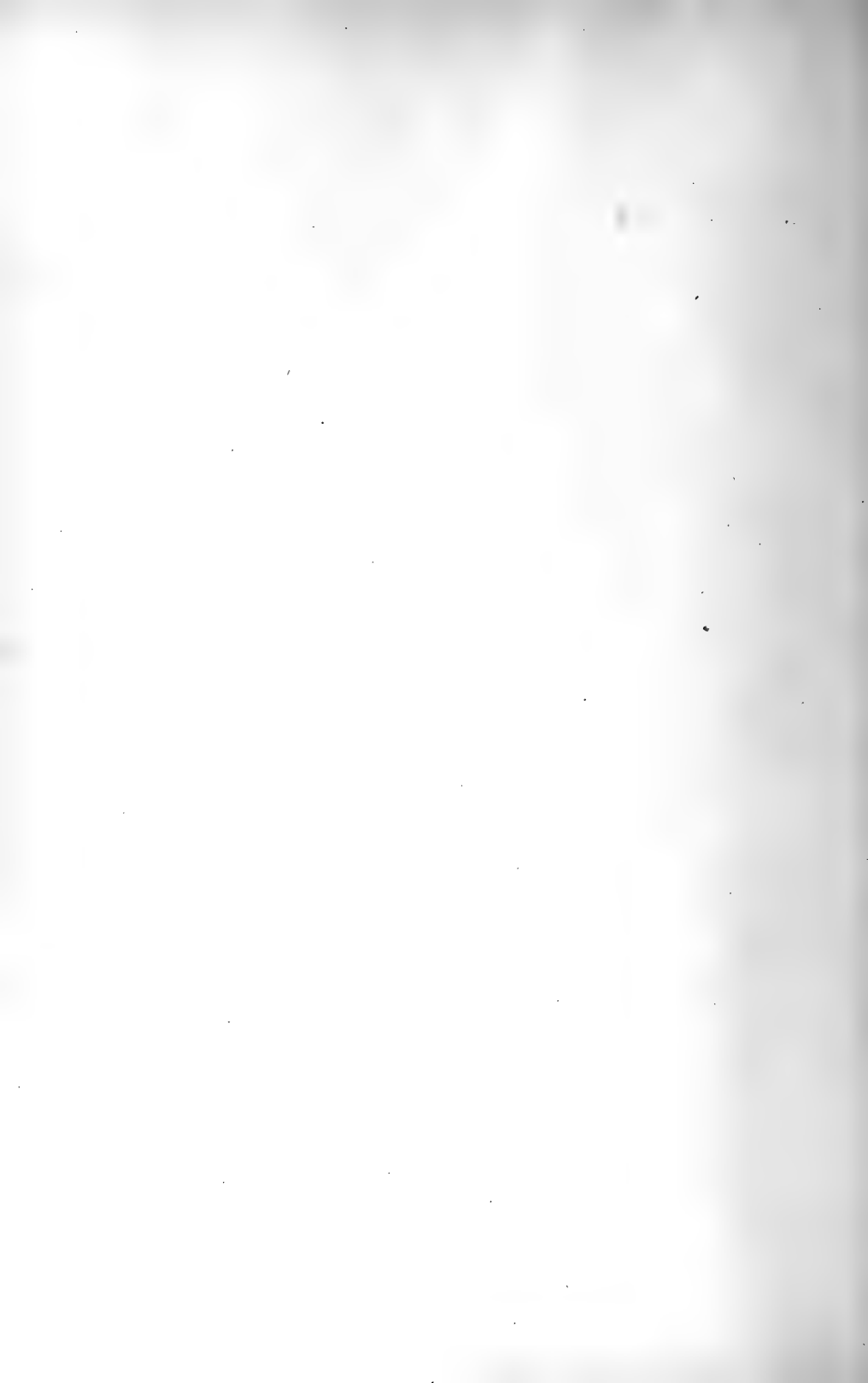
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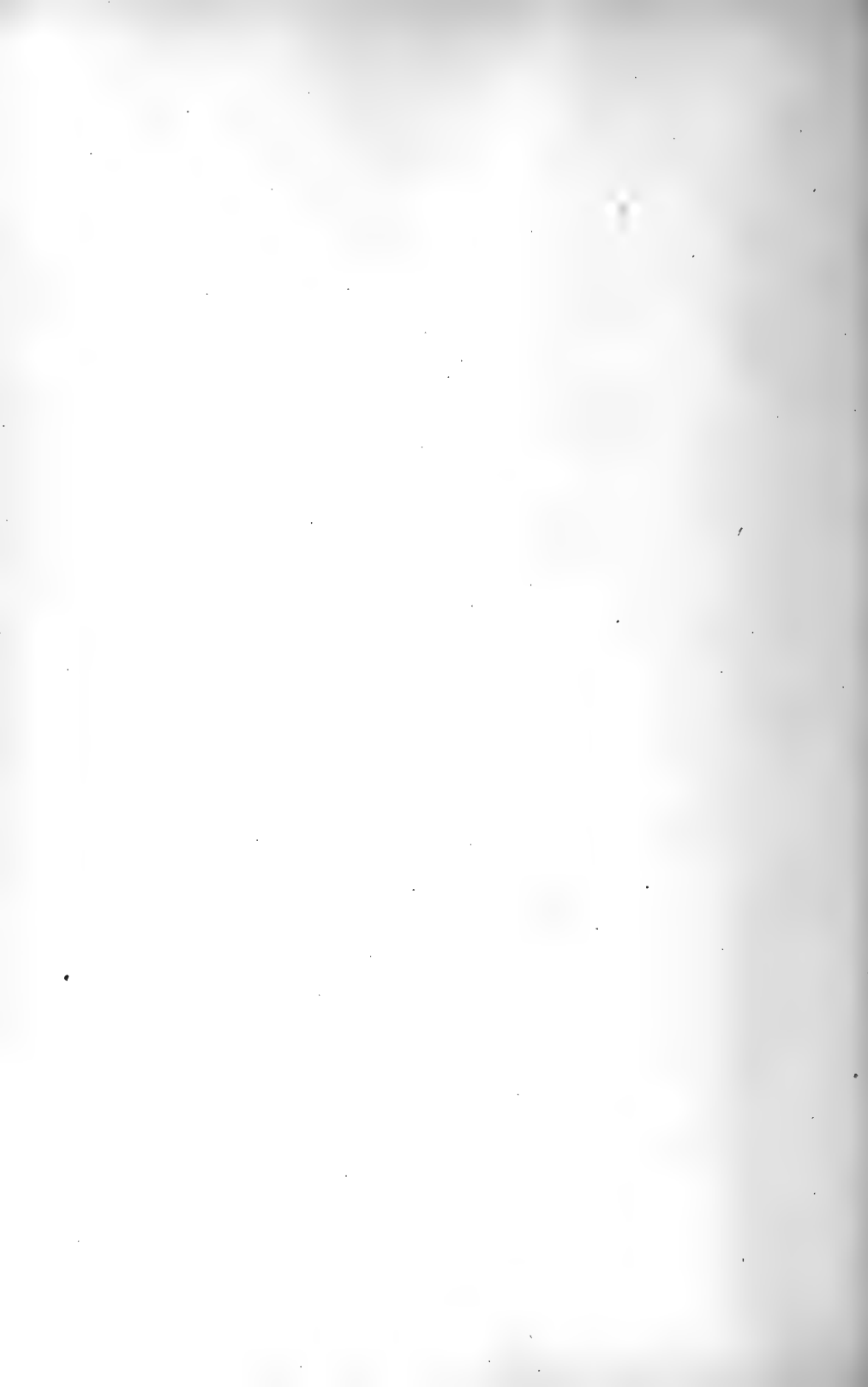
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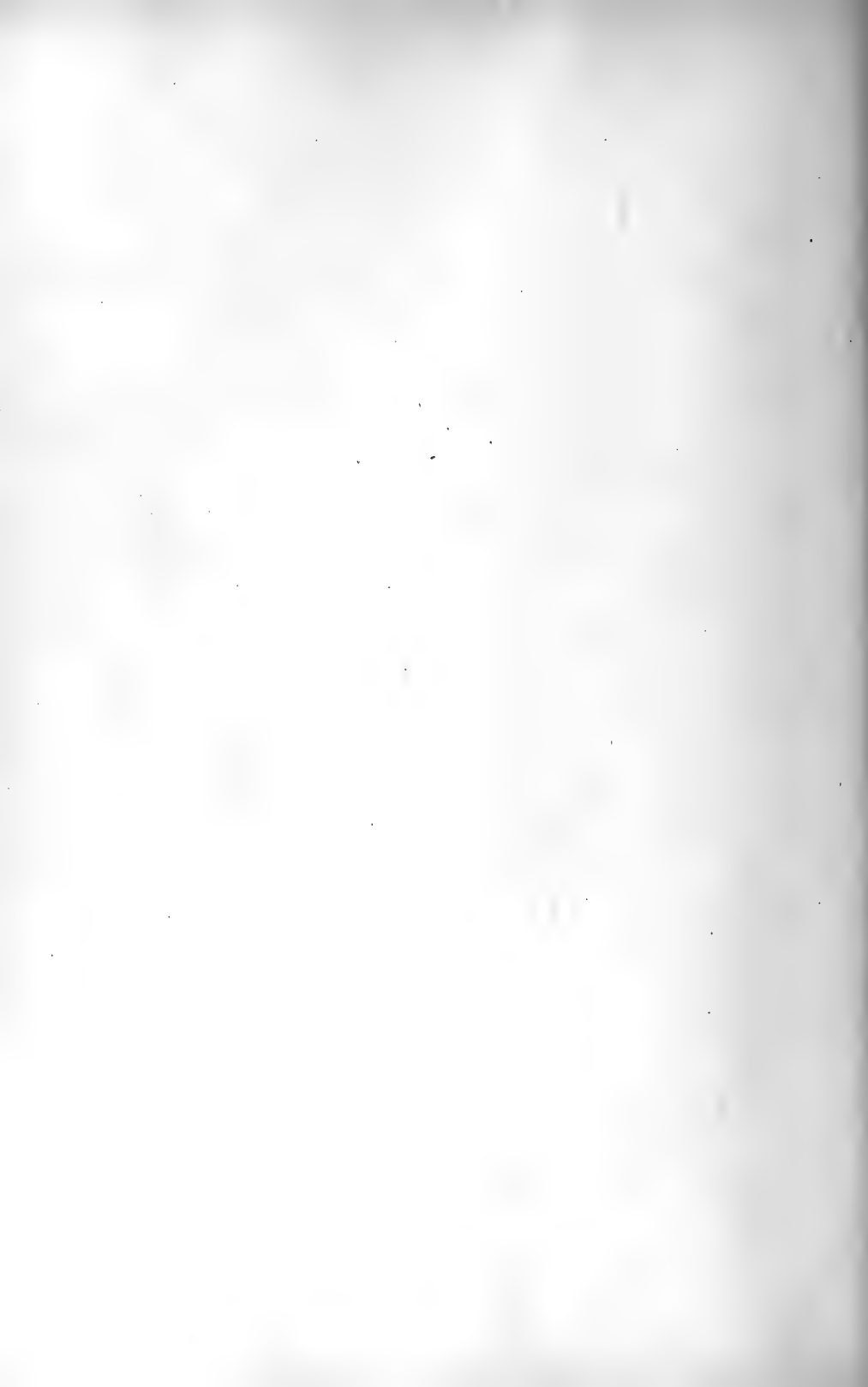
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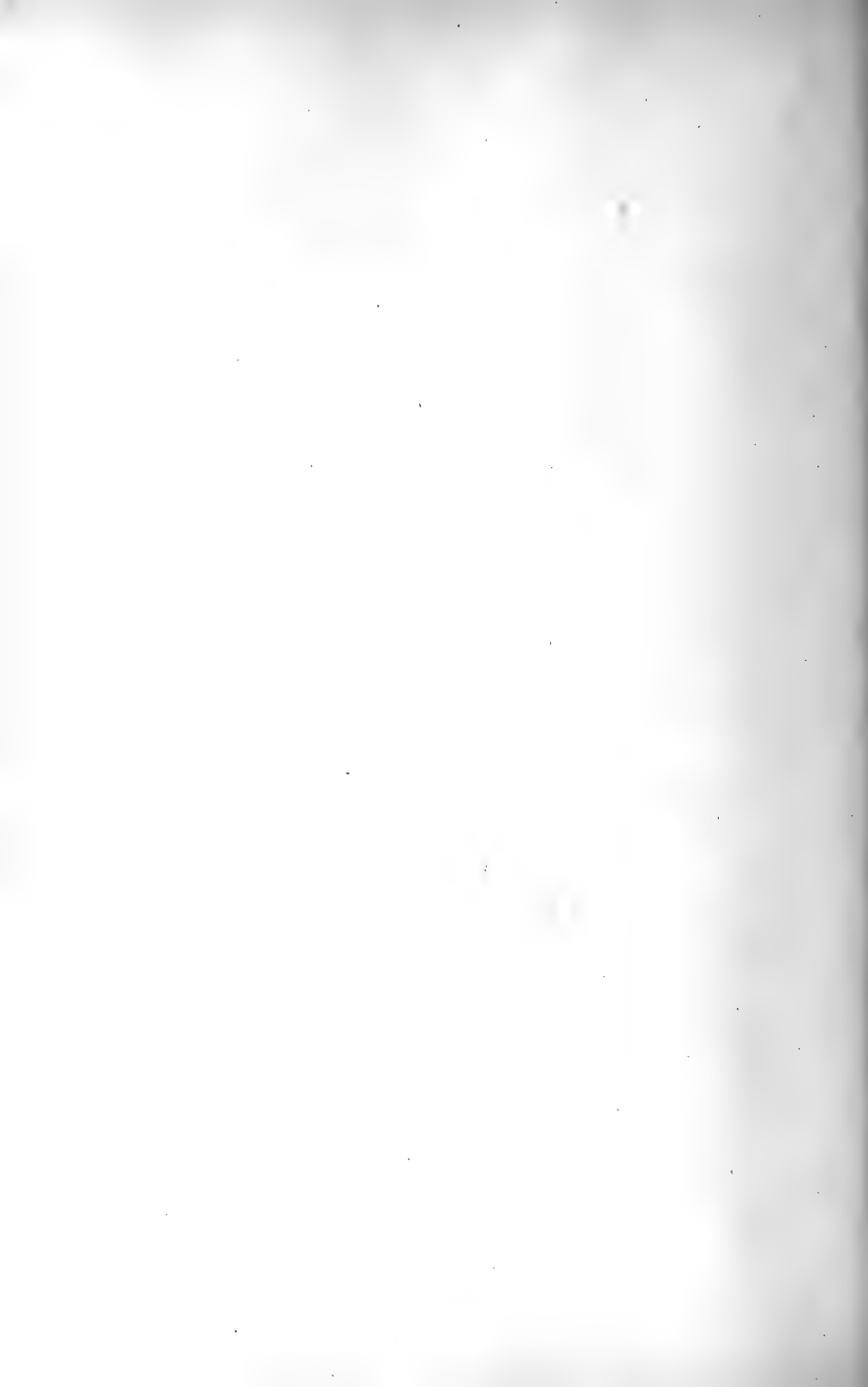


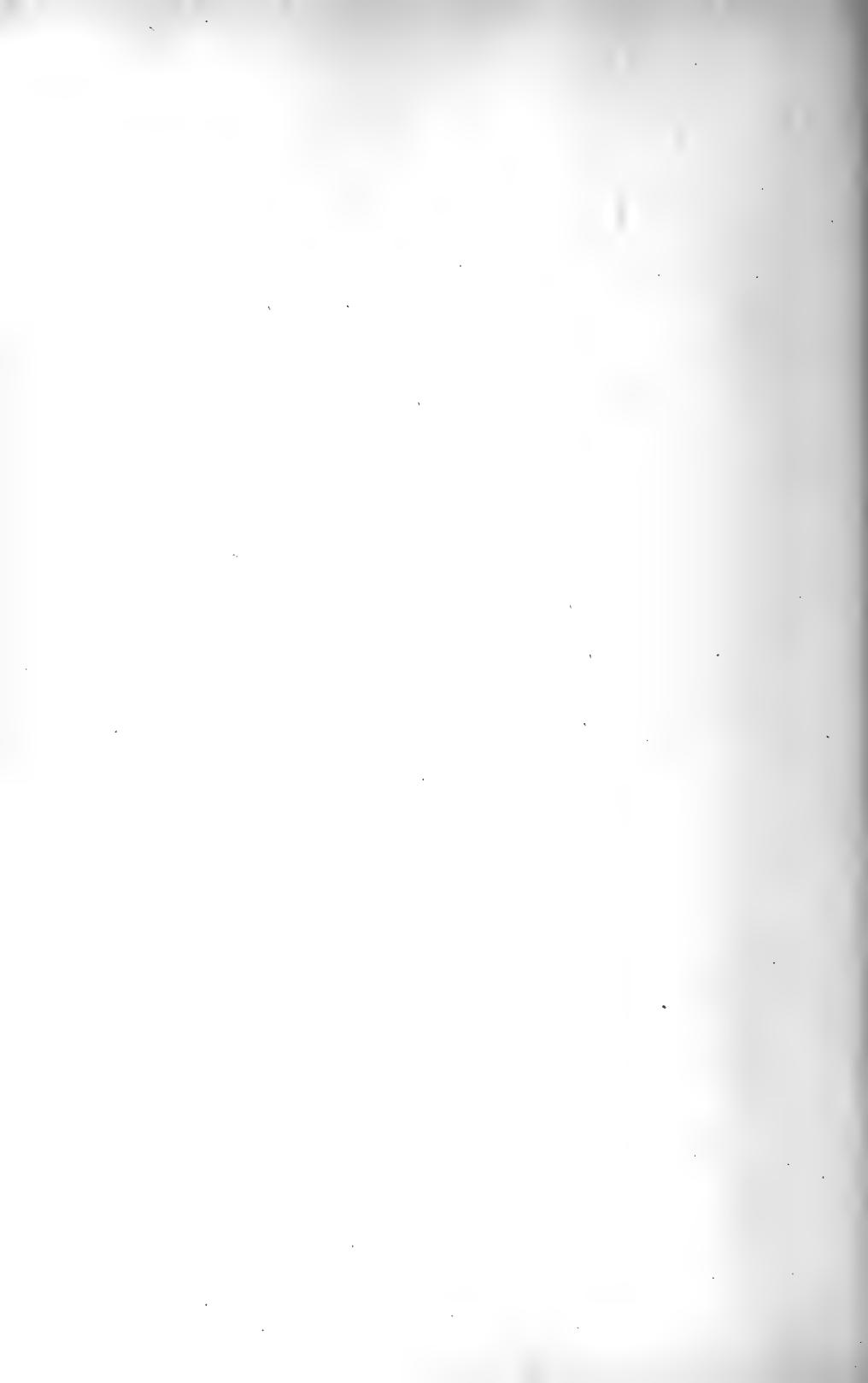
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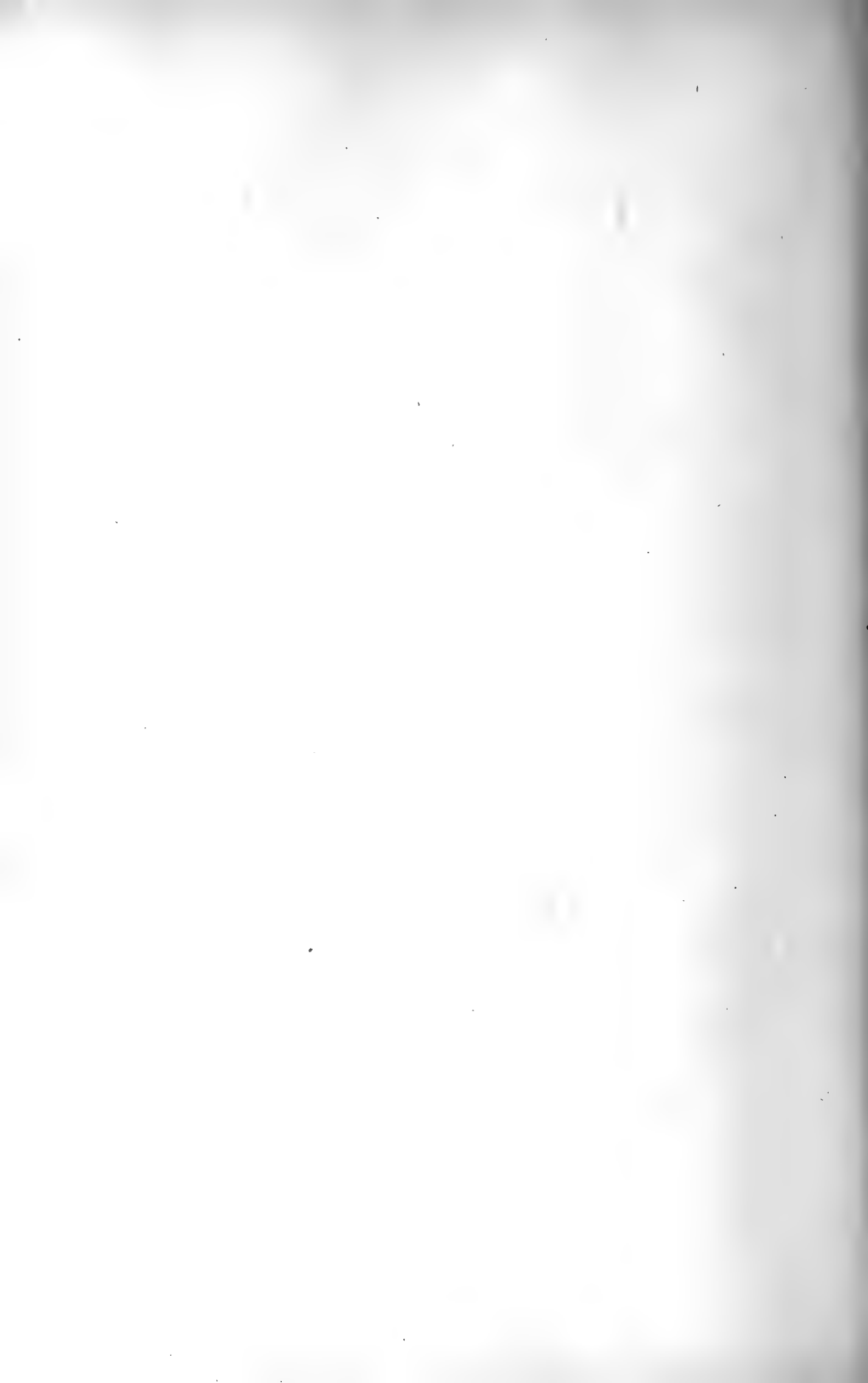




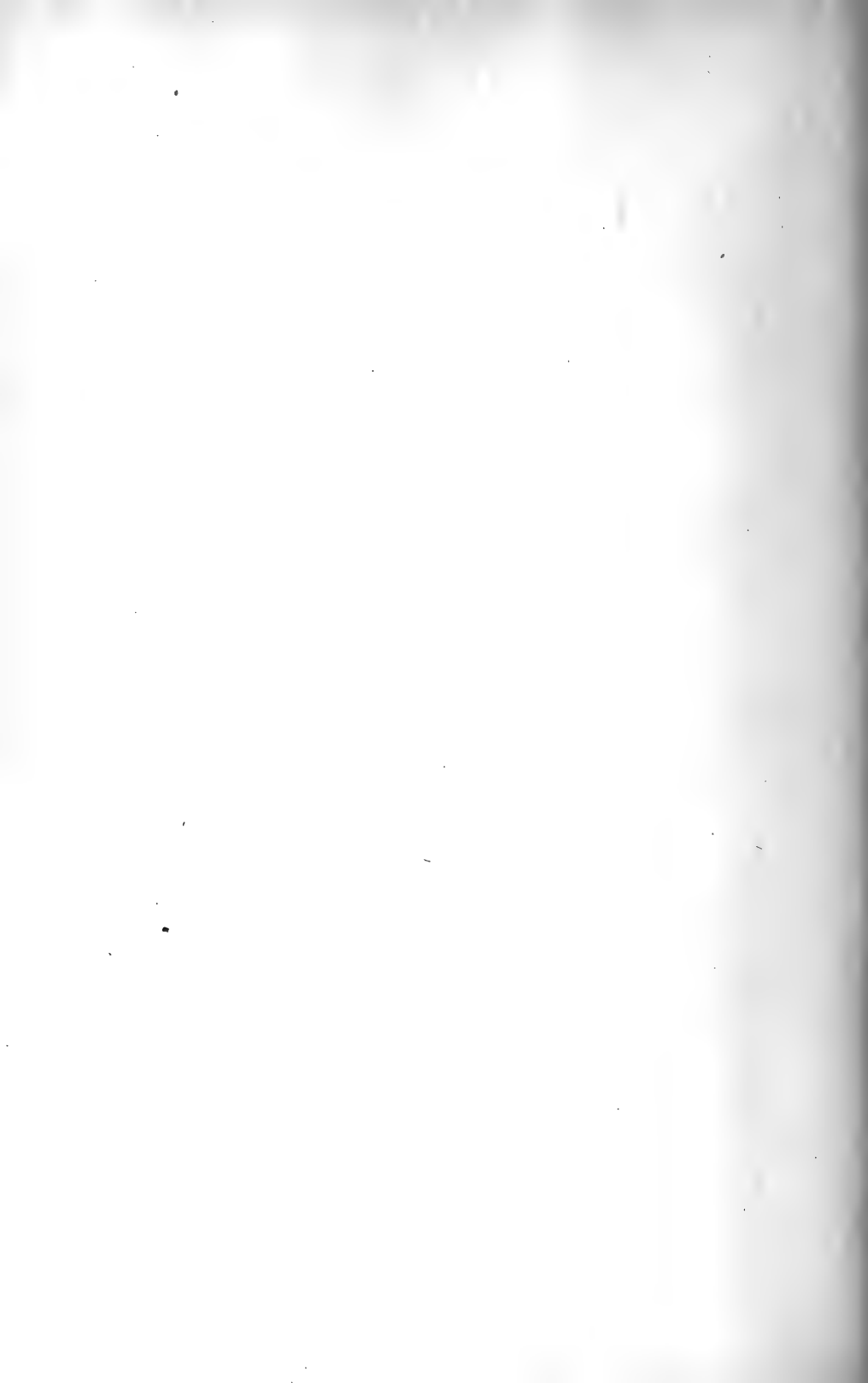


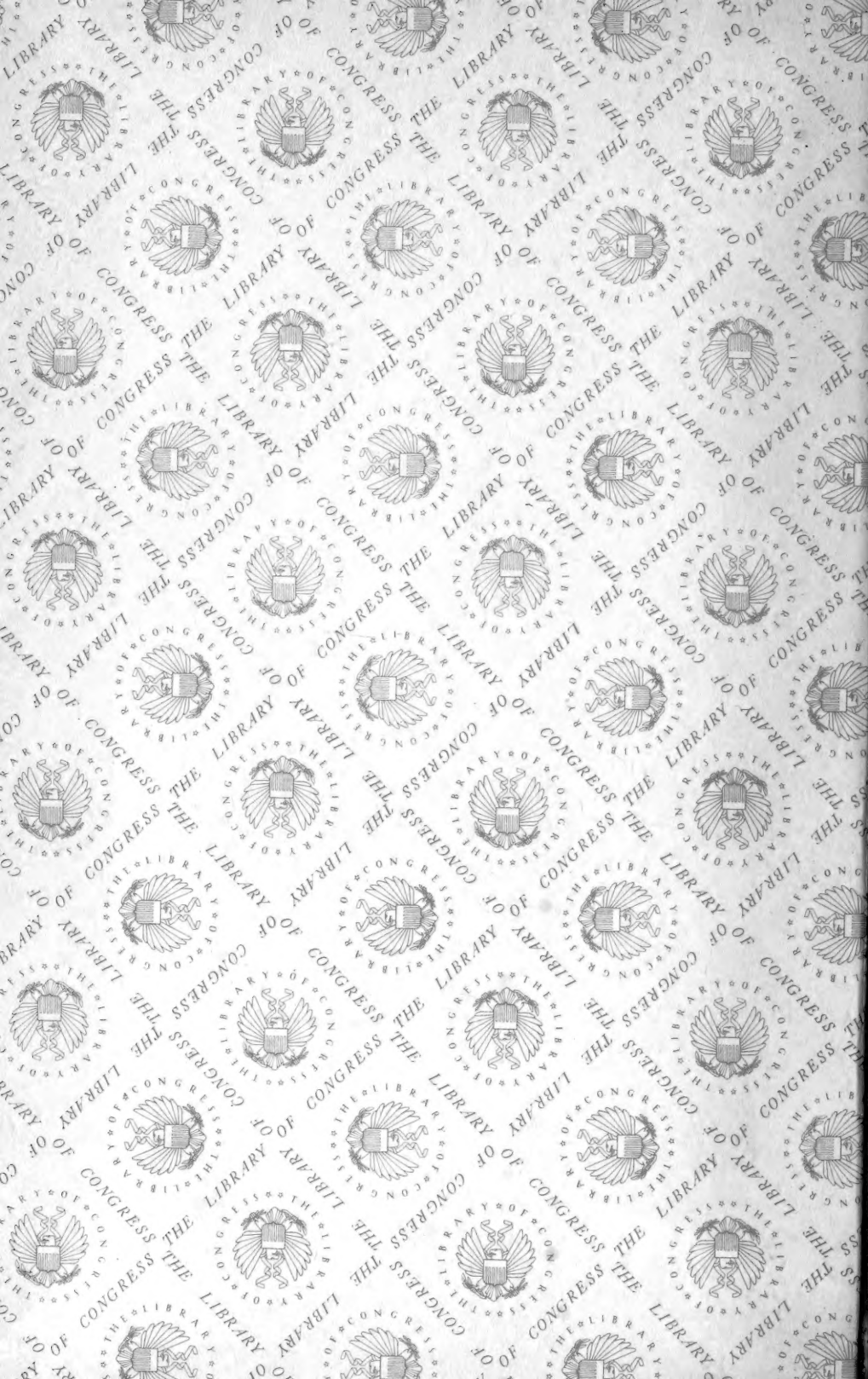


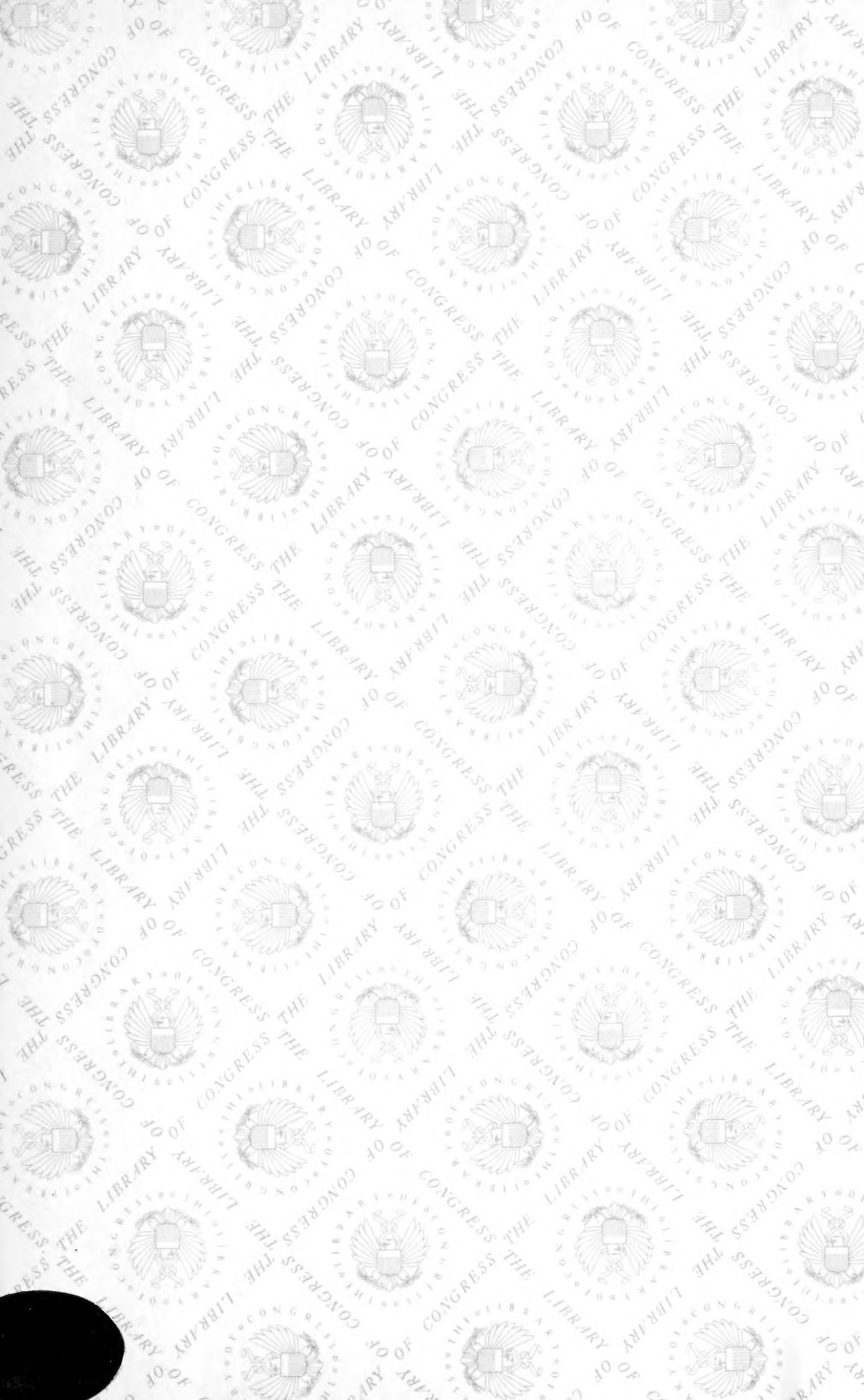












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